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DEPARTMENT OF COMMERCE AND LABOR.

BULLETIN

OF THE .

BUREAU OF LABOR.

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EDITOR,
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CONTENTS.

THE EXHIBIT OF THE UNITED STATES BUREAU OF LABOR AT THE LOUISIANA PURCHASE EXPOSITION.

	Page.
Introduction, by G. W. W. Hanger	969-971
The working of the United States Bureau of Labor, by Carroll D. Wright.	973-989
Bureaus of statistics of labor in the United States, by G. W. W. Hanger.	991-1021
Origin of bureaus.....	994-999
Personnel and financial resources.....	999-1004
Duties of bureaus and their officers.....	1004-1008
Legal powers and methods of investigation.....	1008-1013
Character and scope of actual work done.....	1013-1020
Results.....	1020, 1021
Bureaus of statistics of labor in foreign countries, by G. W. W. Hanger..	1023-1086
Austria.....	1024-1027
Belgium.....	1028-1040
Canada.....	1040-1046
Denmark.....	1046, 1047
France.....	1047-1056
Germany.....	1056-1059
Great Britain.....	1060-1063
Italy.....	1063-1071
Netherlands.....	1072, 1073
New South Wales.....	1073, 1074
New Zealand.....	1074, 1075
Norway.....	1075, 1076
Ontario.....	1076, 1077
Russia.....	1077
Spain.....	1077, 1078
Sweden.....	1078-1080
Switzerland.....	1080
International association for the legal protection of labor.....	1080-1086
Value and influence of labor statistics, by Carroll D. Wright.....	1087-1096
Strikes and lockouts in the United States, 1881 to 1890, by G. W. W. Hanger.	1097-1117
Wages in the United States and in Europe, 1890 to 1903, by G. W. W. Hanger.	1119-1128
Cost of living and retail prices in the United States, 1890 to 1903, by G. W. W. Hanger	1129-1164
Cost of living.....	1129-1155
Consumption of food.....	1156-1158
Retail prices.....	1158-1163
Wholesale and retail prices.....	1163, 1164
Wholesale prices in the United States, 1890 to 1903, by G. W. W. Hanger.	1165-1190

<i>housing of the working people in the United States by employers, by</i>	<i>Page.</i>
<i>G. W. W. Hanger</i>	1191-1243
<i>American Waltham Watch Company, Waltham, Massachusetts</i>	1194-1198
<i>Colorado Fuel and Iron Company</i>	1198-1206
<i>J. B. and J. M. Cornell Company, Coldspring, New York</i>	1206, 1207
<i>The Draper Company, Hopedale, Massachusetts</i>	1207-1209
<i>Ludlow Manufacturing Associates, Ludlow, Massachusetts</i>	1209-1213
<i>Maryland Steel Company, Sparrow Point, Maryland</i>	1214, 1215
<i>S. O. Nelson Manufacturing Company, Leclaire, Illinois</i>	1215-1218
<i>Niagara Development Company, Niagara Falls, New York</i>	1218-1220
<i>Peacedale Manufacturing Company, Peacedale, Rhode Island</i>	1221-1223
<i>Pelzer Manufacturing Company, Pelzer, South Carolina</i>	1224-1226
<i>Plymouth Cordage Company, North Plymouth, Massachusetts</i>	1226-1234
<i>The John B. Stetson Company, Philadelphia, Pennsylvania</i>	1234-1239
<i>S. D. Warren & Co., Cumberland Mills, Maine</i>	1239-1241
<i>Westinghouse Air Brake Company, Wilmerding, Pennsylvania</i>	1241-1243
<i>Public baths in the United States, by G. W. W. Hanger</i>	1245-1367
Municipal—	
Albany, New York.....	1271, 1272
Baltimore, Maryland.....	1272-1275
Boston, Massachusetts.....	1275-1296
Bridgeport, Connecticut.....	1296, 1297
Brookline, Massachusetts.....	1297-1305
Brooklyn, New York.....	1305-1308
Buffalo, New York.....	1308-1311
Cambridge, Massachusetts.....	1311, 1312
Chicago, Illinois.....	1312-1319
Cleveland, Ohio.....	1319, 1320
Des Moines, Iowa.....	1320
Detroit, Michigan.....	1320, 1321
Hartford, Connecticut.....	1321
Hoboken, New Jersey.....	1321, 1322
Holyoke, Massachusetts.....	1322, 1323
Kansas City, Missouri.....	1323
Louisville, Kentucky.....	1323, 1324
Milwaukee, Wisconsin.....	1324-1326
Minneapolis, Minnesota.....	1326
Newark, New Jersey.....	1326, 1327
New Bedford, Massachusetts.....	1327
Newton, Massachusetts.....	1328
New York, New York.....	1328-1336
Philadelphia, Pennsylvania.....	1336, 1337
Portland, Maine.....	1337, 1338
Providence, Rhode Island.....	1338
Rochester, New York.....	1338, 1339
St. Paul, Minnesota.....	1339-1341
Springfield, Massachusetts.....	1341, 1342
Syracuse, New York.....	1342
Taunton, Massachusetts.....	1342, 1343
Troy, New York.....	1343
Utica, New York.....	1343
Washington, District of Columbia.....	1343-1347
Wilmington, Delaware.....	1347
Yonkers, New York.....	1347
Yonkers, New York.....	1347-1349

CONTENTS.

V

Public baths in the United States—Concluded.	Page.
Nonmunicipal—	
New York, New York	1349-1351
Allegheny, Pennsylvania	1351, 1352
Pittsburg, Pennsylvania	1352-1354
Philadelphia, Pennsylvania	1354-1357
San Francisco, California	1357-1361
Special bathing appliances	1361-1367
Trade and technical education in the United States	1369-1417
Introduction	1369-1382
New York Trade School, New York, New York	1383-1385
Pratt Institute, Brooklyn, New York	1385-1389
St. George's Evening Trade School, New York, New York	1389, 1390
Williamson Free School of Mechanical Trades, Pennsylvania	1390-1392
The California School of Mechanical Arts, San Francisco, California	1392-1394
The Wilmerding School of Industrial Arts, San Francisco, California	1395
Dairy School, University of Wisconsin, Madison, Wisconsin	1396, 1397
Department of Dairying, Iowa State College of Agriculture and Me- chanic Arts, Ames, Iowa	1397, 1398
Young Women's Christian Association School, Boston, Massachusetts	1399, 1400
Young Women's Christian Association School, New York, New York	1400, 1401
Women's Training School, St. Louis, Missouri	1401
Philadelphia Textile School and School of Industrial Art, Philadel- phia, Pennsylvania	1403, 1404
Lowell Textile School, Lowell, Massachusetts	1404-1407
New Bedford Textile School, New Bedford, Massachusetts	1407, 1408
Rochester Athenæum and Mechanics' Institute, Rochester, New York	1408-1410
Armstrong and Slater Memorial Trade School, Hampton Normal and Agricultural Institute, Hampton, Virginia	1411-1414
Tuskegee Normal and Industrial Institute, Tuskegee, Alabama	1414-1416
Mount Meigs Colored Industrial Institute, Waugh, Alabama	1417
Snowhill Industrial Institute, Snowhill, Alabama	1417
Hand and machine labor in the United States	1419
Labor legislation in the United States, by G. A. Weber	1421-1486
Labor in factories, sweat shops, etc	1422-1427
Mine labor	1428-1430
Railway labor	1430-1435
Hours of labor	1435-1439
Sunday labor	1439, 1440
Employment of women	1440-1443
Child labor	1443-1454
Licensed occupations	1454-1460
Payment of wages	1460-1469
Employers' liability	1469-1474
Boycotting, blacklisting, intimidation, etc	1474-1477
Labor organizations	1477-1480
Boards of arbitration and conciliation	1480-1484
Bureaus of labor	1484
Free public employment bureaus	1484-1486
Labor conditions in Hawaii	1487-1490

LIST OF ILLUSTRATIONS.

CHARTS RELATING TO STRIKES.

	Page.
1. Strikes, establishments involved, and employees thrown out of work, as ordered by labor organizations and not so ordered, by years, 1881 to 1900.	1102
2. Strikes, establishments involved, and employees thrown out of work, as ordered by labor organizations and not so ordered, by industries, 1881 to 1900.....	1104
3. Strikes ordered by labor organizations and not so ordered, establishments involved, and employees thrown out of work, by States, 1881 to 1900...	1104
4. Per cent of establishments involved in strikes in 5 leading States of total establishments involved in strikes during 20 years, 1881 to 1900.....	1105
5. Per cent of employees thrown out of work in strikes in 5 leading States of total employees thrown out of work during 20 years, 1881 to 1900.....	1105
6. Per cent of establishments involved in strikes in 20 leading cities of total establishments involved in strikes during 20 years, 1881 to 1900.....	1107
7. Per cent of employees thrown out of work by strikes in 20 leading cities of total employees thrown out of work during 20 years, 1881 to 1900.....	1107
8. Per cent of strikes ordered by labor organizations and not so ordered during 20 years, 1881 to 1900.....	1108
9. Per cent of employees thrown out of work by strikes ordered by labor organizations and not so ordered during 20 years, 1881 to 1900.....	1108
10. Per cent of establishments involved in strikes ordered by labor organizations and not so ordered during 20 years, 1881 to 1900.....	1109
11. Per cent of establishments closed on account of strikes of total establishments involved in strikes during 20 years, 1881 to 1900.....	1109
12. Wage loss of employees, assistance to employees by labor organizations, and employers' loss in strikes, by years, 1881 to 1900.....	1110
13. Wage loss of employees, assistance to employees by labor organizations, and employers' loss in strikes, by industries, 1881 to 1900.....	1110
14. Wage loss of employees, assistance to employees by labor organizations, and employers' loss in strikes, by States, 1881 to 1900.....	1110
15. Per cent of wage loss of employees, assistance to employees by labor organizations, and employers' loss in strikes during 20 years, 1881 to 1900.....	1113
16. Results of strikes ordered by labor organizations and not so ordered, by years, 1881 to 1900.....	1114
17. Results of strikes ordered by labor organizations and not so ordered, by industries, 1881 to 1900.....	1114
18. Results of strikes, by States, 1881 to 1900.....	1114
19. Results of strikes to employees thrown out of work, by years, 1881 to 1900..	1114
20. Results of strikes undertaken for 5 leading causes, 1881 to 1900.....	1114
21. Per cent of strikes undertaken for leading causes during 20 years, 1881 to 1900.....	1117

CHARTS RELATING TO WAGES, ETC., 1890 TO 1903.

	Page.
Wages and hours of labor: United States and Europe, 1890 to 1903—	
22. Blacksmiths.....	1122
23. Boiler makers.....	1122
24. Bricklayers.....	1122
25. Carpenters.....	1122
26. Compositors.....	1122
27. Hod carriers.....	1122
28. Iron molders.....	1122
29. Laborers, general.....	1122
30. Machinists.....	1122
31. Painters.....	1122
32. Plumbers.....	1122
33. Stonecutters.....	1122
34. Stone masons.....	1122
35. Wages, hours of labor, number of employees, and cost of living in the United States, 1890 to 1903.....	1128

CHARTS RELATING TO COST OF LIVING AND RETAIL PRICES.

36. Per cent of total income from husbands, wives, children, boarders and lodgers, and other sources, by geographical divisions and general nativity of head of family.....	1132
37. Average cost per family of certain articles of food consumed in 1901, for the United States.....	1146
38. Average expenditure per family for various purposes in 1901, for the United States.....	1146
39. Average cost of food per family each year, 1890 to 1903, for the United States.....	1146
40. Per cent of total expenditure made for various purposes in normal families, by size of income.....	1150
41. Relative prices of food in the North Atlantic States, weighted according to family consumption, 1890 to 1903.....	1160
42. Relative prices of food in the South Atlantic States, weighted according to family consumption, 1890 to 1903.....	1160
43. Relative prices of food in the North Central States, weighted according to family consumption, 1890 to 1903.....	1160
44. Relative prices of food in the South Central States, weighted according to family consumption, 1890 to 1903.....	1161
45. Relative prices of food in the Western States, weighted according to family consumption, 1890 to 1903.....	1161
46. Relative prices of food in the United States, weighted according to family consumption, 1890 to 1903.....	1161

CHARTS RELATING TO WHOLESALE AND RETAIL PRICES.

47. Relative wholesale and retail prices of fresh beef, 1890 to 1903.....	1164
48. Relative wholesale and retail prices of butter, 1890 to 1903.....	1164
49. Relative wholesale and retail prices of eggs, 1890 to 1903.....	1164
50. Relative wholesale and retail prices of wheat flour, 1890 to 1903.....	1164
51. Relative wholesale and retail prices of lard, 1890 to 1903.....	1164
52. Relative wholesale and retail prices of bacon, 1890 to 1903.....	1164
53. Relative wholesale and retail prices of smoked ham, 1890 to 1903.....	1164
54. Relative wholesale and retail prices of Irish potatoes, 1890 to 1903.....	1164
55. Relative wholesale and retail prices of sugar, 1890 to 1903.....	1164
56. Relative wholesale and retail prices of food in the United States, 1890 to 1903.....	1164

CHARTS RELATING TO WHOLESALE PRICES.

	Page.
57. Relative prices of farm products, 1890 to 1903.....	1178
58. Relative prices of food, etc., 1890 to 1903.....	1178
59. Relative prices of cloths and clothing, 1890 to 1903.....	1178
60. Relative prices of fuel and lighting, 1890 to 1903.....	1178
61. Relative prices of metals and implements, 1890 to 1903.....	1178
62. Relative prices of lumber and building materials, 1890 to 1903.....	1178
63. Relative prices of drugs and chemicals, 1890 to 1903.....	1178
64. Relative prices of house-furnishing goods, 1890 to 1903.....	1178
65. Relative prices of all commodities, 1890 to 1903.....	1178
66. Relative prices of raw and manufactured commodities, 1890 to 1903.....	1178
67. Actual prices of live cattle and dressed beef, 1890 to 1903.....	1182
68. Actual prices of wheat and wheat flour, 1890 to 1903.....	1186
69. Actual prices of 96° centrifugal (raw) sugar and granulated sugar, 1890 to 1903.....	1186
70. Actual prices of raw cotton and cotton yarns, carded, white, mule spun, northern (cones 22-1), 1890 to 1903.....	1186
71. Actual prices of scoured Ohio fine fleece wool and worsted yarns (2-40s Australian fine), 1890 to 1903.....	1186
72. Actual prices of crude petroleum and refined 150° water-white petroleum, 1890 to 1903.....	1190
73. Actual prices of foundry No. 2 pig iron and eight-penny wire nails, 1890 to 1903.....	1190
74. Actual prices of foundry No. 2 pig iron and steel rails, 1890 to 1903.....	1190
75. Actual prices of steel billets and galvanized barb wire, 1890 to 1903.....	1190

PHOTOGRAPHS AND PLANS RELATING TO HOUSING OF WORKING PEOPLE BY EMPLOYERS.

Colorado Fuel and Iron Company:

76. Typical old-style dwellings of mining employees.....	1198
77. Group of houses for mining employees, Segundo, Colorado.....	1198
78. House for employees, Rouse, Colorado.....	1198
79. Street in Redstone, Colorado.....	1202
80. Schoolhouse, Redstone, Colorado.....	1202
81. Clubhouse, Primero, Colorado.....	1202
82. Clubhouse, Redstone, Colorado.....	1202
83. Redstone Inn, built for use of employees.....	1202
84. Minnequa Hospital, built for use of employees.....	1202

J. B. & J. M. Cornell Company:

85. House for employees, Plan A.....	1206
--------------------------------------	------

The Draper Company:

86. House for employees, Plan B.....	1208
87. House for employees, Plan C.....	1208
88. A study in back yards.....	1208
89. Bancroft Memorial Library.....	1208
90. Grammar school building.....	1208

Ludlow Manufacturing Associates:

91. Ludlow Cottage.....	1210
92. Plymouth Cottage.....	1210
93. Weston Cottage.....	1210

Maryland Steel Company:

94. House for employees, Plan D.....	1214
95. House for employees, Plan E.....	1214
96. House for employees, Plan F.....	1214

Maryland Steel Company—Concluded.	Page.
97. Houses for employees, Plan H.....	1214
98. House for employees, Plan J.....	1214
99. House for employees, Plan K.....	1214
100. House for employees, Plan L.....	1214
101. Kindergarten Building.....	1214
102. School Building.....	1214
103. Clubhouse for employees.....	1214
N. O. Nelson Manufacturing Company:	
104. School and library building.....	1216
105. House owned by employee.....	1216
106. House for employees, Plan N.....	1216
107. House owned by employee.....	1216
Niagara Development Company:	
108. House for employees, Plan P.....	1218
109. House for employees, Plan Q.....	1218
110. House for employees, Plan R.....	1218
111. House for employees, Plan S.....	1218
112. House for employees, Plan T.....	1218
Peacedale Manufacturing Company:	
113. Houses for employees.....	1222
114. Houses owned by employees.....	1222
115. Hazard Memorial Building.....	1222
Pelzer Manufacturing Company:	
116. House for employees.....	1224
117. Schoolhouses.....	1224
Plymouth Cordage Company:	
118. House for employees, Plan V.....	1230
119. House for employees, Plan X.....	1230
120. House for employees.....	1230
121. House owned by employee.....	1230
122. Loring Reading Room.....	1230
123. Sloyd school.....	1230
J. B. Stetson Company:	
124. Typical houses purchased by employees with the aid of building and loan association stock given by the company for efficient work.....	1238
S. D. Warren & Co.:	
125. House for employees, Plan Y.....	1240
Westinghouse Air Brake Company:	
126. House for employees, Plan Z.....	1242
127. House for employees, Plan AA.....	1242
128. Houses for employees, Plan BB.....	1242

PHOTOGRAPHS AND PLANS RELATING TO PUBLIC BATHS.

Albany, New York:	
129. Municipal Bath.....	1272
Baltimore, Maryland:	
130. Municipal Bath No. 1.....	1274
131. Municipal Bath No. 2.....	1274
Boston, Massachusetts:	
132. L Street Municipal Bath, view from water.....	1278
133. L Street Municipal Bath, women's house and boys' beach.....	1278
134. Harvard Bridge Municipal Bath.....	1282
135. D Street Municipal Gymnasium and Bath.....	1286

Boston, Massachusetts—Concluded.	Page.
136. Dover Street Municipal Bath	1286
137. Cabot Street Municipal Bath	1288
138. Cabot Street Municipal Bath, floor plans	1288
139. North End Municipal Bath	1290
140. State Bath at Revere Beach	1294
141. State Bath at Revere Beach, floor plan	1294
Brookline, Massachusetts:	
142. Municipal Bath	1298
143. Municipal Bath, floor plan	1298
Brooklyn, New York:	
144. Municipal Floating Bath No. 2	1306
145. Municipal Floating Bath No. 2, upper frame plan	1306
146. Pitkin Avenue Municipal Bath	1306
147. Pitkin Avenue Municipal Bath, floor plans	1306
Buffalo, New York:	
148. Municipal Baths	1310
Cambridge, Massachusetts:	
149. Captain's Island Municipal Bath	1312
Chicago, Illinois:	
150. Twenty-fifth Street Beach Municipal Bath	1312
151. Douglas Park Municipal Bath and Gymnasium	1314
Cleveland, Ohio:	
152. Municipal Bath	1320
Newark, New Jersey:	
153. Municipal Bath	1326
New York, New York:	
154. West Forty-first Street Municipal Bath	1334
155. West Sixtieth Street Municipal Bath, front elevation	1334
156. West Sixtieth Street Municipal Bath, longitudinal section	1334
157. West Sixtieth Street Municipal Bath, cellar plan	1334
Philadelphia, Pennsylvania:	
158. Eleventh Street Municipal Bath	1336
Yonkers, New York:	
159. Municipal Bath No. 2	1348
Philadelphia, Pennsylvania:	
160. Gaskill Street Bath	1354
161. Gaskill Street Bath, floor plans	1354
162. Typical shower apparatus	1361
163. Plan of typical shower bath	1362
164. Plan of typical laundry in public bath	1362
165. } Model bath house of the Berlin Society for People's Baths, Berlin	
166. } Industrial Exhibition, 1896	1366
167. }	

**PHOTOGRAPHS RELATING TO TRADE AND TECHNICAL EDUCATION IN
THE UNITED STATES.**

New York Trade School, New York, New York:	
168. School buildings	1384
169. Instruction in pattern making	1384
170. Instruction in blacksmithing	1384
171. Instruction in plumbing	1384
172. Instruction in typesetting	1384
173. Instruction in fresco painting	1384

	Page.
Pratt Institute, Brooklyn, New York:	
174. Main school building.....	1386
175. Science and technology building and electrical building	1386
176. Instruction in applied electricity.....	1386
177. Instruction in machine work—evening class	1386
178. Instruction in wood carving and modeling.....	1386
179. Precious metal work from original designs.....	1386
180. Instruction in dressmaking	1386
181. Instruction in costume designing.....	1386
182. Instruction in millinery	1386
Williamson Free School of Mechanical Trades, near Philadelphia, Pennsylvania:	
183. Administration building and campus.....	1390
184. Instruction in carpentry	1390
185. Instruction in machine work	1390
186. Barn erected by students	1390
California School of Mechanical Arts, San Francisco, California:	
187. School buildings.....	1392
188. Instruction in machine work	1392
189. Instruction in cooking.....	1392
190. Instruction in sewing	1392
Wilmerding School of Industrial Arts, San Francisco, California:	
191. School building	1394
192. Instruction in cabinetmaking.....	1394
193. Instruction in wood carving	1394
194. Instruction in plumbing	1394
Dairy School, University of Wisconsin, Madison, Wisconsin:	
195. Dairy building.....	1396
196. Dairy barn	1396
197. Instruction in dairy machinery	1396
198. Instruction in creamery butter making.....	1396
199. Instruction in farm dairy butter making.....	1396
200. Instruction in cheddar cheese making.....	1396
Young Women's Christian Association School, Boston, Massachusetts:	
201. Instruction in cooking	1400
202. Instruction in laundry work.....	1400
Young Women's Christian Association School, New York, New York:	
203. Instruction in nursing.....	1400
204. Instruction in millinery	1400
Pennsylvania Museum and School of Industrial Art, Philadelphia, Pennsylvania:	
205. School building	1404
206. Experimental dyeing laboratory	1404
207. Heavy loom weaving.....	1404
208. Experimental weaving—hand looms	1404
209. Instruction in card stamping and lacing	1404
Lowell Textile School, Lowell, Massachusetts:	
210. School buildings.....	1406
211. Dyeing laboratory	1406
212. Cotton spinning department.....	1406
213. Woolen and worsted spinning department.....	1406
214. Hand looms	1406
215. Carpet looms	1406

LIST OF ILLUSTRATIONS.

XIII

New Bedford Textile School, New Bedford, Massachusetts:	Page.
216. School building.....	1408
217. Knitting department.....	1408
218. Experimental weaving—hand looms	1408
219. Power weaving department.....	1408
Rochester Athenæum and Mechanics' Institute, Rochester, New York:	
220. Instruction in statics.....	1410
221. Instruction in machine work.....	1410
222. Instruction in dressmaking.....	1410
223. Instruction in cooking	1410
Armstrong and Slater Trade School, Hampton Institute, Hampton, Virginia:	
224. Students at work on school building.....	1412
225. Instruction in wheelwrighting.....	1412
226. Instruction in tillage.....	1412
227. School experiment farm.....	1412
228. Instruction in combined draft of animals	1412
229. Instruction in judging swine.....	1412
230. Instruction in cooking	1412
231. Instruction in laundry work.....	1412
232. Instruction in dressmaking.....	1412
233. Instruction in spinning and rug weaving	1412
Tuskegee Institute, Tuskegee, Alabama:	
234. School buildings and grounds.....	1414
235. Students at work on school building.....	1414
236. Instruction in blacksmithing.....	1414
237. Students at work in truck garden.....	1414
238. School dairy herd.....	1414
239. Instruction in use of cream separators.....	1414
240. Instruction in cooking.....	1414
241. Instruction in dressmaking.....	1414
242. Instruction in bee culture	1414
243. Instruction in care of poultry.....	1414

CHARTS RELATING TO HAND AND MACHINE LABOR.

244. Number of hours worked under each method in producing selected units—agriculture, mining, quarrying, transportation, etc.....	1419
245. Number of hours worked under each method in producing selected units of manufacture	1419

CHARTS RELATING TO LABOR LEGISLATION.

246. Factories and workshops, mercantile establishments, etc.....	1422
247. Mine labor	1428
248. Railway labor	1430
249. Hours of labor.....	1436
250. Employment of women	1440
251. Employment of children	1444
252. Examination and licensing of certain employees	1454
253. Payment of wages.....	1460
254. Boycotting, blacklisting, intimidation, etc.....	1474
255. Labor organizations.....	1478
256. Bureaus of labor.....	1484

CHARTS RELATING TO LABOR CONDITIONS IN HAWAII.

	Page.
257. Per cent of population of each race in 1900.....	1488
258. Population, by race, 1853 to 1900.....	1488
259. Per cent of total persons engaged in gainful occupations of each race in 1900	1489
260. Per cent of total persons engaged in gainful occupations in each general occupation group in 1900	1489
261. Persons engaged in gainful occupations, by race, in 1900.....	1490
262. Persons engaged in mechanical occupations, by race, in 1890, 1896, and 1900	1490
263. Persons engaged in certain mechanical occupations, by race, in 1900.....	1490
264. Persons employed on sugar plantations, by race, 1892 to 1902	1490
265. Average daily wages of sugar plantation labor, 1890 to 1902.....	1490
266. Persons employed in skilled occupations on sugar plantations, by classified daily wages and race, 1902.....	1490

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INTRODUCTION.

BY G. W. W. HANGER,

Representative Department of Labor (now Bureau of Labor of the Department of Commerce and Labor), U. S. Government Board, Louisiana Purchase Exposition.

Under an act of Congress approved March 3, 1901, entitled "An act to provide for celebrating the one hundredth anniversary of the purchase of the Louisiana territory by the United States by holding an international exhibition of arts, industries, manufactures, and the products of the soil, mine, forest, and sea, in the city of St. Louis, in the State of Missouri" provision was made not only for generous financial assistance to the exposition company, but also for the exhibit by the United States Government of such articles and material as would illustrate "the function and administrative faculty of the Government in time of peace and its resources as a war power, tending to demonstrate the nature of our institutions and their adaptation to the wants of the people."

Exhibits were to be prepared for each of the Executive Departments of the Government and also for the Smithsonian Institution, the National Museum, the United States Commission of Fish and Fisheries, the Department of Labor, the Library of Congress, and the Bureau of the American Republics. In order to secure a complete and harmonious arrangement of the exhibits of the Government, provision was made for the creation of the United States Government Board, which was to be charged with the "selection, purchase, preparation,

transportation, arrangement, installation, safe-keeping, exhibition, and return of such articles and material" as the heads of the several above-mentioned Departments and offices might decide to include in the Government exhibit. This board was to be composed of several persons, one to be named by the head of each of the Departments and offices enumerated. Since the date of the above act two of the independent offices named, the Department of Labor and the Commission of Fish and Fisheries, have become bureaus of the new Department of Commerce and Labor, but their representation on the Government Board was not affected thereby. A new member, however, was added to the board as the representative of the new Executive Department, to have in charge the exhibits of the various bureaus which were included therein, with the exception of the two mentioned above, which were already represented upon the board.

In accordance with the provisions of the law, the writer was designated by the Commissioner of Labor as the representative of the Department of Labor (now the Bureau of Labor of the Department of Commerce and Labor) on the Government Board, and was directed to prepare for the exposition an exhibit which should illustrate the work and functions of that office. Owing to the nature of the work of the Bureau of Labor, which is largely statistical in character, the exhibit has been necessarily confined within narrow limits so far as the character of the exhibit is concerned, although the range of the subjects covered is considerable, embodying practically all of the investigations and reports of the Bureau which furnish material susceptible of use for exhibit purposes.

The exhibits are of three principal kinds, as follows: First, complete sets of the publications of the Federal and State bureaus of labor and of the factory inspectors of the various States, together with miscellaneous volumes of Federal reports relating to labor and industrial conditions—this entire collection of reports being intended to illustrate important functions of the Federal and State bureaus as affecting labor; second, a number of series of charts illustrating in graphic form the results of some of the important investigations of the Bureau of Labor, and incidentally including the results of special investigations and researches which were undertaken for the purpose of supplementing certain interesting features of the Bureau's work; and third, a number of series of photographs and plans illustrating still other features of the work of the Bureau of Labor.

The purpose of the present Bulletin is to place in a form convenient for reference and use a part of the charts and photographs exhibited and to furnish the figures and information upon which they are based, as well as to make known the results of the special research and work undertaken in connection with the preparation of the exhibit. It is thought that this purpose can best be accomplished by

THE WORKING OF THE UNITED STATES BUREAU OF LABOR.^(a)

BY CARROLL D. WRIGHT.

ORIGIN.

Legislative efforts looking to the establishment of a Federal office for the collection and publication of labor statistics date from April 10, 1871, when Hon. George F. Hoar, of Massachusetts, then a member of the House of Representatives, introduced a bill "to provide for the appointment of a commission on the subject of wages and hours of labor and the division of profits between labor and capital in the United States." December 13, 1871, Mr. Hoar reintroduced his bill with certain amendments, and amendments were also proposed by Mr. Kilinger. This bill passed the House of Representatives December 20, 1871, was brought into the Senate January 8, 1872, and was referred to the Committee on Education and Labor. It was reported back by Senator Sawyer with certain minor amendments, and other amendments were proposed by Senator Wilson. Nothing more was done in that Congress, which was the Forty-second; but April 23, 1879, the legislature of Massachusetts sent a resolution to Congress asking for the establishment of a national bureau of labor, and May 5 of the same year Mr. Murch, of Maine, introduced a bill to establish a bureau of labor statistics. On December 8, 1879, Senator Hoar introduced in the Senate a bill to establish a labor commission. No action was taken upon either bill. April 12, 1880, in the House of Representatives, Mr. Warner introduced a bill to establish a bureau of mines and mining, a bureau of manufactures, and a bureau of labor statistics in the Department of the Interior. This bill was never considered. January 9, 1882, in the House of Representatives, Mr. Belford reintroduced Mr. Warner's bill. December 4, 1883, in the Senate, Mr. Blair introduced a bill to establish a bureau of statistics of labor, and December 10 of the same year, in the House of Representatives, Mr. Willis introduced a bill to establish a bureau of statistics of labor and industries. December 11, the same year, Mr. Hopkins, in the House of Representatives, introduced a bill to establish and maintain a department of labor statistics. February 12, 1884, the Committee on Labor

^a Revised from an article in the *Cosmopolitan Magazine* of June, 1892, and printed with the consent of the publishers.

of the House, after considering various bills, reported the bill introduced by Mr. Hopkins to establish and maintain a department of labor statistics, and this bill passed the House of Representatives April 19, 1884. It was received in the Senate on the 21st of the same month, and was reported back, April 25, by Mr. Blair, chairman of the Committee on Education and Labor. May 22, 1884, Mr. Garland proposed certain amendments to this bill, as did Senator Aldrich. Out of these various bills introduced in 1883-84 an act establishing a bureau of labor in the Department of the Interior was framed and passed, and was signed by the President June 27, 1884. This act provided that "the Commissioner of Labor shall collect information upon the subject of labor, its relation to capital, the hours of labor and the earnings of laboring men and women, and the means of promoting their material, social, intellectual, and moral prosperity."

The earlier bills to which reference has been made were introduced as the result of the establishment of the bureau of statistics of labor in Massachusetts; the later bills, those introduced in the year 1879 and subsequently, resulted from the various petitions of labor organizations.

The United States Bureau of Labor was organized in January, 1885, and the Commissioner of Labor, February 4, 1885, addressed a letter to the honorable Secretary of the Interior declaring the policy of the office, in which he said:

It should be remembered that a bureau of labor can not solve industrial or social problems, nor can it bring direct returns in a material way to the citizens of the country; but its work must be classed among educational efforts, and by judicious investigations and the fearless publication thereof it may and should enable the people to comprehend more clearly and more fully many of the problems which now vex them.

After the Bureau of Labor—as one of the bureaus of the Department of the Interior—had been in existence three years and had shown the character of its work, the Knights of Labor demanded that Congress should create a Department of Labor, to be independent of any of the general Departments. To this end Congressman O'Neill, of Missouri, introduced a bill to establish a department of labor, and this bill was promptly passed by the House and the Senate, and was approved June 13, 1888, the act providing that "there shall be at the seat of government a Department of Labor, the general design and duties of which shall be to acquire and diffuse among the people of the United States useful information on subjects connected with labor, in the most general and comprehensive sense of that word, and especially upon its relation to capital, the hours of labor, the earnings of laboring men and women, and the means of promoting their material, social, intellectual, and moral prosperity." The act defined the organization of the Department and the duties of the Commissioner, and provided for

transferring the Bureau of Labor, its duties, etc., to the Department of Labor. The new Department, therefore, simply continued the existence of the Bureau of Labor, but with independent functions. The head of the Department was not placed in the Cabinet, but occupied under the new law a position similar to that of the Commissioner of Agriculture before that Department was made a Cabinet office.

Under the act approved February 14, 1903, establishing a new executive department, to be known as the Department of Commerce and Labor, it was provided that, among other offices, the existing Department of Labor be placed under the jurisdiction and supervision of the new Department, this provision to take effect and be in force July 1, 1903. In accordance with the provisions of this act the former Department of Labor on July 1, 1903, became a bureau—the Bureau of Labor—of the Department of Commerce and Labor. Inasmuch as no provision was made for any change in its general design and duties, its work is being carried on along practically the same lines as formerly.

ORGANIZATION AND FUNCTIONS.

With this brief history of the origin of the United States Bureau of Labor, it is well to describe its organization and functions, as they really represent those of the various State bureaus. The Bureau is presided over by a Commissioner, entitled “The Commissioner of Labor;” there is a chief clerk, statistical experts, special agents, and a proper corps of clerks, messengers, and watchmen. The grade of pay is the same as that pertaining to other Federal offices. The functions of the Bureau are to collect and publish information, as the law defines, relating to the material, social, intellectual, and moral prosperity of laboring men and women. Under these broad powers the Commissioner can undertake any investigation which in his judgment relates to the welfare of the working people of the country, and which can be carried out with the means and the force at his disposal. He is obliged by law to make an annual report covering the results of his investigations, and he may make, in his judgment, special reports on particular subjects whenever required to do so by the President or either House of Congress, or when he shall think the subject in his charge requires a special report.

Since November, 1895, the Bureau has published a bimonthly bulletin. This is published in accordance with a law approved March 2 of the same year, as follows:

The Commissioner of Labor is hereby authorized to prepare and publish a bulletin of the Department of Labor as to the condition of labor in this and other countries, condensations of State and foreign labor reports, facts as to conditions of employment, and such other

done it unto me," then we have put the Christian religion into social science, have answered the question rationally, and must have the light of facts in order that the action, either of governments or of communities, under the spirit of this answer shall not be either futile or absurd. Altruism is the rule of the day as against the individualism of the past. Its tendency must be guided by facts, and facts can be gained only by the most faithful application of the statistical method, not only in the gathering thereof, but in the application. Personal observation on which to base conclusions is not sufficient. Very many illustrations might be given of this fact, but they are hardly essential. The assertion can be made, however, without fear of contradiction, that very many conclusions have been deduced from mere observation which the facts, when properly classified, show were erroneous. The attempt to compare criminal conditions through criminal statistics, the use of city criminal statistics as against those belonging to the country, the acceptance of one line of statistics relative to moral conditions when two or three are essential—all these directions in which the statistical method is used teach us that ordinary observation is too faulty, at least for legislative purposes. So the character of the work of an office having the functions of the Bureau of Labor must be based upon the Baconian idea of securing the facts before taking the action.

The character of the work of the Bureau has been critical, involving the closest application of the statistical method, and has been free to a large extent, if not entirely, from any desire to argue a point. If there have been errors in the origin of investigations they have arisen from a misconception of what constitutes labor statistics. A glance at the different volumes already issued may perhaps give the best evidence as to whether the Bureau has properly construed the character of its work. The Bureau has issued 18 annual reports, 12 special reports, and 53 bimonthly bulletins.

ANNUAL REPORTS.

The first annual report related to industrial depressions. The information for this report was collected and classified by a force entirely inexperienced, with a small amount of money at command, with the anxiety that comes of the organization of a new work, with some jealousies as to the appointment of the head prejudicing its labors, with a critical watchfulness of friend and foe, and with the idea prevailing among labor organizations that the duty of the new office was in the nature of propagandism, and not of the educational function of gathering and publishing facts. This report upon industrial depressions, however, gave the Bureau of Labor a standing, and convinced its friends that with proper financial equipment it could handle any reasonable investigation that might be committed to it. The statistics

The eighth annual report was especially ordered by Congress, and related to industrial education in different countries. It took up the status of industrial education in the United States, Austria, Belgium, France, Germany, Great Britain, Italy, Russia, the Scandinavian countries, and Switzerland. It also dealt with the kindergarten in relation to manual training, manual training in conjunction with bookwork, manual training and trade instruction in reformatories, and the effect of manual training and trade instruction upon the individual, and it contained an extensive bibliography of works treating upon industrial education. This report has been of great value in States where the subject of industrial education in any form has been discussed by legislatures.

The ninth annual report related to building and loan associations, including under that general title all associations the objects of which were similar to those of building and loan associations, the general subject including cooperative banks, mutual loan associations, homestead aid associations, savings fund and loan associations, and other similar institutions. The work was comprehensive, and covered all the associations in the United States as they existed in 1892-93, with full tables giving the facts as to number, series, shares, number and sex of shareholders, etc. It also contained special interest-rate tables and average premium-rate tables, with a description of the various plans adopted for the payment of premiums and for the distribution of profits, as well as withdrawal plans. The report also contained a chapter giving general legislation relating especially to building and loan associations.

The tenth annual report was a continuation of the third, relating to strikes and lockouts, and was in two volumes, Volume I containing an analysis of all tables and the detail tables of all strikes and lockouts occurring in the United States from January 1, 1887, to June 30, 1894. Volume II contained summaries of the detail tables given in Volume I. The analysis reclassified and resummarized the facts contained in the third annual report, giving strikes and lockouts from January 1, 1881, to December 31, 1886. The tenth, therefore, comprehended all strikes and lockouts from 1881 to June 30, 1894.

The eleventh annual report was the result of an investigation concerning the work and wages of men, women, and children, classifying the occupations and earnings of women and children and of men, and dealing with the relative efficiency of women and children and of men engaged in the same occupation, the comparison of earnings of women and children and of men of the same grade of efficiency, the reasons usually given for the employment of women and girls, the hours per week worked in establishments, and the different occupations followed by women and girls.

The twelfth annual report was the result of instructions from Congress authorizing the Commissioner of Labor to make an investigation relating to the economic aspects of the liquor problem. The report gave the production and consumption of liquors, the traffic in liquors, the revenue derived from the production of and the traffic in the same, the experience and practice of employers relative to the use of intoxicants, and various tables relating to license fees or special taxes, fines, etc. It also gave the laws regulating the revenue derived from liquor production and traffic in the different States. The report was for the year ending June 30, 1897.

The thirteenth annual report, entitled "Hand and Machine Labor," was also the result of an investigation authorized by joint resolution of Congress, under the provisions of which the Commissioner of Labor was authorized and directed to investigate and make report upon the effect of the use of machinery upon labor and the cost of production, the relative productive power of hand and machine labor, the cost of manual and machine power as they are used in the productive industries, etc. This resolution was approved August 15, 1894, and after between three and four years of very difficult labor the results of the investigation were reported in October, 1898, in the thirteenth annual report. The work was published in two volumes.

The fourteenth annual report, published in December, 1899, related to water, gas, and electric light plants under private and municipal ownership, and was designed to bring out the essential facts relating to such works in the United States. The report was the result of an agreement by the various commissioners of labor at their annual convention held in Albany in June, 1896. It was impossible to make such a report comprehensive in all its details, yet the Bureau was able to bring out the facts for the representative private and municipal works under the various designations as they existed in the United States at the time of the investigation.

The fifteenth annual report is the only compilation the Bureau has ever indulged in. All its works other than this have been the results of original inquiry and investigation. The fifteenth annual gives the wages and hours of labor in the principal commercial countries of the world for as many years as possible, the facts being taken from authenticated official reports of the countries involved in the compilation. In many countries the quotations of rates run back many years, and in all countries, as far as possible, they are brought down to the summer of 1900.

The sixteenth annual report covers the statistics of strikes and lockouts from June 30, 1894 (the date at which the investigation resulting in the tenth annual report ended), to December 31, 1900. The report includes also the data contained in the third and tenth reports, thus furnishing an exhibit of the strikes and lockouts in the

United States from January 1, 1881, to December 31, 1900, a period of twenty years. A history of strikes prior to 1880, and also the attitude of the courts relative to conspiracy, etc., are given.

The seventeenth annual report relates to trade and technical education in the United States and in the principal European countries. Besides very full details in regard to the schools, the report gives the results of special inquiries directed to ascertaining the influence of the schools upon the pupils, upon apprenticeship, and upon any industries, as well as the attitude of employers, of school graduates, and of labor unions toward industrial education. This second report upon industrial education was made in response to many urgent requests.

The eighteenth annual report, which is now in the hands of the printer, presents the results of an extended investigation into the cost of living of workingmen's families and the retail prices for the years 1890 to 1903 of the principal staple articles of food used by such families. The object of the investigation into cost of living was to determine the cost of housing, fuel, lighting, food, clothing, etc., in the ordinary family in the United States. The object of the investigation into retail prices was to determine the changes in the prices of the staple articles of food for a period of years, and thereby to determine as nearly as possible the changes in the cost of living in the several years covered.

Of the annual reports already published all are now out of print, except the sixth, fifteenth, sixteenth, and seventeenth.

SPECIAL REPORTS.

The first of the special reports published by the Bureau is entitled "A Report upon the Statistics of and Relating to Marriage and Divorce," and was sent to Congress in 1889 under special provision of an act of Congress to enable the Commissioner to make the report. This document covers the statistics of marriage and divorce in the United States for twenty years, from 1867 to 1886 inclusive, and it comprehends also statistics and laws of other countries. To make it required the collection of data from libels for divorce and divorce dockets of more than 2,600 courts in the United States having divorce jurisdiction. Much has been said by my friends in labor organizations condemnatory of this report, not as to its character, but as to the propriety of the Bureau of Labor making it. The answer is very emphatic and to my mind thoroughly comprehensive—that Congress found the Bureau of Labor the only one connected with the Government having the proper machinery for carrying out its purposes; further, if there is any subject in which labor should be actively interested, and which concerns the happiness of the workingman, it is the sacredness and the permanency of home relations. To my own mind, the report upon marriage and divorce is as thoroughly—although

on the first appearance somewhat remotely—essential to labor in all its interests as any reports upon wages or cost of living.

The second special report is one that has been in very great demand. It was originally published in 1892, and comprehended the labor laws of the United States Government and of the different States, giving such laws in full, together with annotations relative to decisions of courts affecting them. By a concurrent resolution adopted by Congress March 5, 1896, a second and revised edition of the second special report was published. A third edition, again revised, is now in press as the tenth special report.

The third special report is simply an analysis and index of all State labor reports that had been published up to 1893, and was made with special reference to the needs of the Bureau. No subsequent analysis has been made, but an index of the contents of the various annual and biennial reports of the States having bureaus of statistics of labor or similar offices has been prepared to supply the needs of the Bureau itself and those of the various libraries of the country.

The fourth special report relates to compulsory insurance in Germany; the fifth special, to the Gothenburg system of regulating the liquor traffic; the sixth special, to the phosphate industry of the United States; the seventh special, to the slums of the cities of New York, Chicago, Philadelphia, and Baltimore; the eighth special, to the housing of the working people; the ninth special consists of a study of the Italians in the city of Chicago, and the eleventh special, now in press, is a study of the subject of the regulation and restriction of output.

Of the special reports already published all are now out of print.

In addition to the numbered special reports two special reports have been made upon labor in Hawaii. The law originally required these reports to be made annually, but as now amended a report will be required in 1905 and every five years thereafter.

BULLETIN.

In addition to the annual and special reports just enumerated fifty-three numbers of the bimonthly Bulletin have already been issued. The leading articles in these bulletins are as follows:

- No. 1. Private and public debt in the United States, by George K. Holmes.
Employer and employee under the common law, by V. H. Olmsted and S. D. Fessenden.
- No. 2. The poor colonies of Holland, by J. Howard Gore, Ph. D.
The industrial revolution in Japan, by William Eleroy Curtis.
Notes concerning the money of the U. S. and other countries, by W. C. Hunt.
The wealth and receipts and expenses of the U. S., by W. M. Stuart.
- No. 3. Industrial communities: Coal Mining Co. of Anzin, by W. F. Willoughby.
- No. 4. Industrial communities: Coal Mining Co. of Blanzy, by W. F. Willoughby.
The sweating system, by Henry White.

- No. 5. Convict labor.
Industrial communities: Krupp Iron and Steel Works, by W. F. Willoughby.
- No. 6. Industrial communities: Familistère Society of Guise, by W. F. Willoughby.
Cooperative distribution, by Edward W. Bemis, Ph. D.
- No. 7. Industrial communities: Various communities, by W. F. Willoughby.
Rates of wages paid under public and private contract, by Ethelbert Stewart.
- No. 8. Conciliation and arbitration in the boot and shoe industry, by T. A. Carroll.
Railway relief departments, by Emory R. Johnson, Ph. D.
- No. 9. The padrone system and padrone banks, by John Koren.
The Dutch Society for General Welfare, by J. Howard Gore, Ph. D.
- No. 10. Condition of the Negro in various cities.
Building and loan associations.
- No. 11. Workers at gainful occupations at the censuses of 1870, 1880, and 1890, by W. C. Hunt.
Public baths in Europe, by Edward Mussey Hartwell, Ph. D., M. D.
- No. 12. The inspection of factories and workshops in the U. S., by W. F. Willoughby.
Mutual rights and duties of parents and children, guardianship, etc., under the law, by F. J. Stimson.
The municipal or cooperative restaurant of Grenoble, France, by C. O. Ward.
- No. 13. The anthracite mine laborers, by G. O. Virtue, Ph. D.
- No. 14. The Negroes of Farmville, Va.: A social study, by W. E. B. Du Bois, Ph. D.
Incomes, wages, and rents in Montreal, by Herbert Brown Ames, B. A.
- No. 15. Boarding homes and clubs for working women, by Mary S. Fergusson.
The trade-union label, by John Graham Brooks.
- No. 16. The Alaskan gold fields and opportunities for capital and labor, by S. C. Dunham.
- No. 17. Brotherhood relief and insurance of railway employees, by E. R. Johnson, Ph. D.
The nations of Antwerp, by J. Howard Gore, Ph. D.
- No. 18. Wages in the United States and Europe, 1870 to 1898.
- No. 19. The Alaskan gold fields and opportunities for capital and labor, by S. C. Dunham.
Mutual relief and benefit associations in the printing trade, by W. S. Waudby.
- No. 20. Condition of railway labor in Europe, by Walter E. Weyl, Ph. D.
- No. 21. Pawnbroking in Europe and the United States, by W. R. Patterson, Ph. D.
- No. 22. Benefit features of American trade unions, by Edward W. Bemis, Ph. D.
The Negro in the black belt: Some social sketches, by W. E. B. Du Bois, Ph. D.
Wages in Lyon, France, 1870 to 1896.
- No. 23. Attitude of women's clubs, etc., toward social economics, by Ellen M. Henriotin.
The production of paper and pulp in the U. S. from Jan. 1 to June 30, 1898.
- No. 24. Statistics of cities.
- No. 25. Foreign labor laws: Great Britain and France, by W. F. Willoughby.
- No. 26. Protection of workmen in their employment, by Stephen D. Fessenden.
Foreign labor laws: Belgium and Switzerland, by W. F. Willoughby.
- No. 27. Wholesale prices: 1890 to 1899, by Roland P. Falkner, Ph. D.
Foreign labor laws: Germany, by W. F. Willoughby.
- No. 28. Voluntary conciliation and arbitration in Great Britain, by J. B. McPherson.
System of adjusting wages, etc., in certain rolling mills, by J. H. Nutt.
Foreign labor laws: Austria, by W. F. Willoughby.
- No. 29. Trusts and industrial combinations, by J. W. Jenks, Ph. D.
The Yukon and Nome gold regions, by S. C. Dunham.
Labor Day, by Miss M. C. de Graffenried.

- No. 30. Trend of wages from 1891 to 1900.
Statistics of cities.
Foreign labor laws: Various European countries, by W. F. Willoughby.
- No. 31. Betterment of industrial conditions, by V. H. Olmsted.
Present status of employers' liability in the U. S., by S. D. Fessenden.
Condition of railway labor in Italy, by Dr. Luigi Einaudi.
- No. 32. Accidents to labor as regulated by law in the U. S., by W. F. Willoughby.
Prices of commodities and rates of wages in Manila.
The Negroes of Sandy Spring, Md.: A social study, by W. T. Thom, Ph. D.
The British workmen's compensation act and its operation, by A. Maurice Low.
- No. 33. Foreign labor laws: Australasia and Canada, by W. F. Willoughby.
The British conspiracy and protection of property act and its operation, by A. Maurice Low.
- No. 34. Labor conditions in Porto Rico, by Azel Ames, M. D.
Social economics at the Paris Exposition, by Prof. N. P. Gilman.
The workmen's compensation act of Holland.
- No. 35. Cooperative communities in the United States, by Rev. Alexander Kent.
The Negro landholder of Georgia, by W. E. B. Du Bois, Ph. D.
- No. 36. Statistics of cities.
Statistics of Honolulu, H. I.
- No. 37. Railway employees in the United States, by Samuel McCune Lindsay, Ph. D.
The Negroes of Litwalton, Va.: A social study of the "Oyster Negro," by William Taylor Thom, Ph. D.
- No. 38. Labor conditions in Mexico, by Walter E. Weyl, Ph. D.
The Negroes of Cinclare Central Factory and Calumet Plantation, La., by J. Bradford Laws.
- No. 39. Course of wholesale prices, 1890 to 1901.
- No. 40. Present condition of the hand-working and domestic industries of Germany, by Henry J. Harris, Ph. D.
Workmen's compensation acts of foreign countries, by Adna F. Weber.
- No. 41. Labor conditions in Cuba, by Victor S. Clark, Ph. D.
Beef prices, by Fred C. Croxton.
- No. 42. Statistics of cities.
Labor conditions in Cuba.
- No. 43. Report to the President on anthracite coal strike, by Carroll D. Wright.
- No. 44. Factory sanitation and labor protection, by C. F. W. Doehring, Ph. D.
- No. 45. Course of wholesale prices, 1890 to 1902.
- No. 46. Report of Anthracite Coal Strike Commission.
- No. 47. Report of the Commissioner of Labor on Hawaii.
- No. 48. Farm colonies of the Salvation Army, by Commander Booth Tucker.
The Negroes of Xenia, Ohio, by Richard R. Wright, jr., B. D.
- No. 49. Cost of living.
Labor conditions in New Zealand, by Victor S. Clark, Ph. D.
- No. 50. Labor unions and British industry, by A. Maurice Low.
Land values and ownership in Philadelphia, by A. F. Davies.
- No. 51. Course of wholesale prices, 1890 to 1903.
The union movement among coal-mine workers, by Frank Julian Warne, Ph. D.
- No. 52. Child labor in the United States, by Hannah R. Sewall, Ph. D.
- No. 53. Wages and cost of living.

In addition to the annual and special reports and the bimonthly bulletin, a large part of the force of the Bureau was engaged for nearly a year, in association with the Senate Committee on Finance, in collecting for that committee the statistics of wages and prices for a period of fifty-two years (from 1840 to 1891, inclusive), which were published in seven volumes. The Bureau also made some reports in accordance with Senate resolutions calling for the same, namely, one on total cost and labor cost of transformation in the production of certain articles in the United States, Great Britain, and Belgium; one on the cost of producing white pine lumber in the United States and Canada, and one on the effect of the international copyright law in the United States.

To my mind, all the facts which have so far been gathered and published by the Bureau bear, either directly or indirectly, upon the industrial and humanitarian advance of the age, and are all essential in any intelligent discussion of what is popularly known as the "labor question." Labor statistics must not be considered as simply statistics relating to narrow fields, but, in the language of the law creating the Bureau of Labor, they should relate to the "material, social, intellectual, and moral prosperity" of all concerned; and this means the material, social, intellectual, and moral prosperity of society itself. If the industrial elements of a nation are not progressing intellectually and morally to a higher social plane, little can be expected from all the educational efforts which may be made under the conventional and academic methods. There must be the broader education which comprehends the industrial freedom of men and women as a prerequisite to securing intellectual and political freedom.

Kindly criticism is sometimes made upon the Bureau by its friends that it does not do this or that—that it has not taken up investigations that are most pressing in their nature. The answer to this is that the Bureau is limited in many directions. It would be a very great piece of maladministration to undertake an investigation that could not be carried to reasonable completeness—to undertake a work which the Bureau has neither the means nor the equipment to carry on, and very many of the suggestions, which are in the kindest way made to it, are suggestions which would involve the expenditure of hundreds of thousands of dollars to carry out and the employment of a force of hundreds of people instead of the use of the means and the force at the command of the Bureau. There has never been a suggestion made relative to the work of the Bureau that the Commissioner would not gladly have carried out had he had the means to do so. And yet Congress has been very liberal. Commencing with \$25,000 as the annual appropriation for the Bureau of Labor, Congress now appropriates more than \$184,000, exclusive of printing, for the

administration of the Bureau, and, so far as I know, there has been no inclination on the part of the House, the Senate, or the President to in any way abridge or interfere with the work of the Bureau. On the other hand, it has met with the most generous confidence on the part of Congress and of the President, and been aided in all reasonable ways in bringing its work to a high standard of excellence.

This is in evidence through the continued demand for the reports of the Bureau. One of the most gratifying demands comes from reading clubs which are being established rapidly all over the country by labor organizations. The study of economic facts by such organizations ought to be stimulated in every way, and the Federal Government, through its Congress, does not hesitate to meet this demand.

The question is often asked why the Bureau does not furnish data each year showing the condition of labor and industrial matters continuously. This would be a desirable result to be accomplished, but it would involve a very large expenditure of money and practically a census of manufacturing establishments.

This can be done only at the decennial census of the United States. In order to give complete statements of an industry the Bureau would have to canvass all the establishments in that industry, and hence in all industries. It will be seen at once that this is an impossibility. The Bureau is therefore content to make special investigations each year, the results of which, if of sufficient importance in volume and value, are published in its annual report, and if of minor importance in volume, although maybe not in value, they are published in the bimonthly bulletin. The special reports authorized by Congress enable the Bureau to publish the results of special investigations which can not be included in either of the other forms of publication.

The Bureau can determine many things by the statistical method, and it must work emphatically on that method. It is often said that it should undertake the agitation of certain features of reform; in other words, that it should become the instrument of propagandism. But when this proposition is made, the question should be asked, Whose ideas of reform should be adopted, of what propositions should it become the propagandist, and to what extent should it argue for or against the platforms of this or that party or organization? It seems to me that all men who comprehend the value of accurate knowledge must see at once that for the Bureau to enter upon such a course would result in its immediate abolition; that should it become the advocate of any theory it would thereby become partisan in its work and thus destroy its own efficiency. If the Bureau advocates a proposition it necessarily takes the position of an advocate, and hence a partisan, and lays itself open to the charge of having col-

lected facts to substantiate and bolster up its position, or of having neglected to secure facts which might antagonize such position. Whenever the head of the Bureau of Labor attempts to turn its efforts in the direction of sustaining or of defeating any public measure, its usefulness will be past and its days will be few. It is only by the fearless publication of facts, without regard to the influence those facts may have upon any party's position or any partisan's views, that it can justify its continued existence, and its future usefulness will depend upon the nonpartisan character of its personnel.

BUREAUS OF STATISTICS OF LABOR IN THE UNITED STATES.

BY G. W. W. HANGER.

On April 28, 1903, in Washington, D. C., was held the nineteenth annual convention of the Association of Officials of Bureaus of Labor Statistics of America. This body, which is unique in character, has met thus in annual convention in some important city of the country for the past twenty-one years, with the exception of the years 1890 and 1893, when, however, informal conferences were held. The association was organized and held its first convention at Columbus, Ohio, in September, 1883. To the Hon. H. A. Newman, at that time commissioner of labor of the State of Missouri, is due the credit for calling this first conference of the heads of the State labor bureaus then in existence. His reasons are stated as follows:

As there seemed to be a wide difference in the manner of gathering and compiling statistics in the different States of the Union that have bureaus of labor statistics, the commissioner of this department concluded that a free interchange of opinions by the different commissioners would be of much value, not alone to the commissioners, but to the State legislatures as well. To this end, after much correspondence, he called a meeting of the commissioners to be held at Columbus, Ohio, on the 26th day of September, 1883.

At the time of the first convention, bureaus had been established in 12 States. In 11 of these (California, Illinois, Indiana, Massachusetts, Michigan, Missouri, New Jersey, New York, Ohio, Pennsylvania, and Wisconsin), the bureaus were in active operation, while in 1 (Connecticut) the bureau had been abolished after issuing two reports. Of the 11 bureaus in active operation 6 were represented at this convention, and the number of bureaus actually represented at these conventions has since increased to 20 in 1903—an evidence of growth not only in the number of bureaus of this character but also in interest in the objects for which the association was formed. During its life the association has held conventions in important cities of 16 States. Its objects, as set forth in the official rules adopted in 1892, are as follows:

To meet annually for the discussion of business pertaining to the association; for the discussion of methods of work, current and otherwise, pertaining to bureaus of labor or industrial statistics and kindred departments with which its members are connected in their respective States; also, to foster the ties of friendship, interchange ideas, and in various ways seek to promote the welfare of these bureaus of statistics; to present subjects for investigation, and to transact all such business as is deemed consistent with the duties of statisticians.

The active members of the association consist of commissioners and chiefs of State and national bureaus of labor and industrial statistics and their deputies and chief clerks, while all ex-commissioners and ex-deputies of such bureaus are ex officio members. Within the last few years there have also been admitted to membership in this association the Director of the United States Bureau of the Census and his chief statistical staff, the deputy minister of labor of the Dominion of Canada, and the secretary of the labor bureau of Ontario.

The bureaus, departments, or offices thus represented have, from time to time, been created and provided for by the various State legislatures, and, in the case of the United States Bureau of Labor, by the Congress of the United States. Their purposes or objects have been variously stated in their organic acts, but an examination of these acts discloses a practical uniformity of purpose—the collection and dissemination of statistics relating to the industrial, social, moral, educational, and living conditions of the working classes.

The rapid increase in number of these offices in the United States is due largely, without doubt, to the desire of legislators for information upon which to base laws for the betterment of the working and living conditions of the workmen in the factories, shops, and mines of our country. The passage of such laws has more and more been urged by the public in general and by the laboring classes in particular. Publicity concerning the conditions of factories, shops, and mines as regards the safeguards instituted for the protection of workmen, and information as to the actual condition of the workman as regards his wages, hours of labor, cost of living, and general shop and home conditions are necessary to scientific remedial legislation. Prior to the creation of these offices but little in the way of actual statistics relating to labor was obtainable. The labor and expense of collecting the necessary data covering any considerable field were too great for private undertaking. Besides, the possible unreliability of data collected in this manner and lacking official confirmation detracted largely from their value and rendered their use as a basis of legislation unsafe. Here, undoubtedly, was a proper and legitimate field for Federal and State activity.

The first bureau established in this or any other country for the collection and publication of statistics relating to labor was that of the State of Massachusetts, the date of its establishment being June 23, 1869. Three years later, on April 12, 1872, Pennsylvania created a bureau of industrial statistics, and in the next year, 1873, Connecticut established a bureau of labor statistics, which was abolished after a brief life, being reestablished April 23, 1885. Kentucky followed, creating a bureau of agriculture, horticulture, and statistics on March 20, 1876, and Ohio established a bureau of labor statistics on May 5, 1877. During the next two years New Jersey, Indiana, Missouri, and

Illinois established bureaus, and since 1880 other States have followed, there being at the present time 33 bureaus and offices of this character in the United States in active operation. These offices, as well as their chief officers, have been designated by various titles, but their purposes and functions are entirely similar. The following table gives the States in which bureaus of statistics of labor have been established, the official designation of each bureau, the title of the head thereof, and the date of the approval of the act creating the office.

BUREAUS OF STATISTICS OF LABOR ESTABLISHED IN THE UNITED STATES PRIOR TO JULY 1, 1903.

[The chief officer of each of the State bureaus is located at the capital of the State in which he serves, with three exceptions: The Chief of the Bureau of Industrial Statistics of Maryland is located at Baltimore, the Commissioner of the Bureau of Labor Statistics of California at San Francisco, and the Commissioner of the Bureau of Statistics of Labor of Louisiana at New Orleans.]

State.	Name of office.	Title of head of office.	Date of approval of act creating the office.
United States.....	Bureau of Labor (a).....	Commissioner.....	June 27, 1884
California.....	Bureau of Labor Statistics.....	Commissioner.....	Mar. 3, 1883
Colorado.....	Bureau of Labor Statistics.....	Deputy commissioner (b).....	Mar. 24, 1887
Connecticut.....	Bureau of Labor Statistics.....	Commissioner.....	July 12, 1873
Idaho.....	Bureau of Immigration, Labor, and Statistics.....	Commissioner.....	Mar. 2, 1899
Illinois.....	Bureau of Labor Statistics.....	Secretary.....	May 29, 1879
Indiana.....	Bureau of Statistics.....	Chief.....	Mar. 29, 1879
Iowa.....	Bureau of Labor Statistics.....	Commissioner.....	Apr. 3, 1884
Kansas.....	Bureau of Labor and Industry (d).....	Commissioner.....	Mar. 5, 1886
Kentucky.....	Bureau of Agriculture, Labor, and Statistics (e).....	Commissioner.....	Mar. 20, 1876
Louisiana.....	Bureau of Statistics of Labor.....	Commissioner.....	July 9, 1900
Maine.....	Bureau of Industrial and Labor Statistics.....	Commissioner.....	Mar. 7, 1887
Maryland.....	Bureau of Industrial Statistics.....	Chief.....	Mar. 27, 1884
Massachusetts.....	Bureau of Statistics of Labor.....	Chief.....	June 23, 1869
Michigan.....	Bureau of Labor and Industrial Statistics.....	Commissioner.....	June 6, 1883
Minnesota.....	Bureau of Labor (f).....	Commissioner.....	Mar. 8, 1887
Missouri.....	Bureau of Labor Statistics and Inspection (g).....	Commissioner.....	May 19, 1879
Montana.....	Bureau of Agriculture, Labor, and Industry.....	Commissioner.....	Feb. 17, 1893
Nebraska.....	Bureau of Labor and Industrial Statistics.....	Deputy commissioner (h).....	Mar. 31, 1887
New Hampshire.....	Bureau of Labor.....	Commissioner.....	Mar. 30, 1893
New Jersey.....	Bureau of Statistics of Labor and Industries.....	Chief.....	Mar. 27, 1878
New York.....	Department of Labor (i).....	Commissioner.....	May 4, 1883
North Carolina.....	Bureau of Labor and Printing (j).....	Commissioner.....	Feb. 28, 1887
North Dakota.....	Department of Agriculture and Labor.....	Commissioner.....	Oct. 1, 1889
Ohio.....	Bureau of Statistics of Labor.....	Commissioner.....	May 5, 1877
Oregon.....	Bureau of Labor Statistics and Inspection of Factories and Workshops.....	Commissioner.....	Feb. 24, 1903
Pennsylvania.....	Bureau of Industrial Statistics.....	Chief (k).....	Apr. 12, 1872
Rhode Island.....	Bureau of Industrial Statistics.....	Commissioner.....	Mar. 29, 1847
South Dakota.....	Department of Labor and Statistics (l).....	Commissioner.....	Mar. 7, 1890
Tennessee.....	Bureau of Labor, Statistics, and Mines.....	Commissioner.....	Mar. 23, 1891
Utah.....	Bureau of Statistics (m).....	Territorial statistician.....	Mar. 13, 1890
Virginia.....	Bureau of Labor and Industrial Statistics.....	Commissioner.....	Mar. 3, 1898
Washington.....	Bureau of Labor.....	Commissioner.....	Mar. 3, 1897
West Virginia.....	Bureau of Labor.....	Commissioner.....	Feb. 22, 1889
Wisconsin.....	Bureau of Labor, Census, and Industrial Statistics (n).....	Commissioner.....	Apr. 3, 1883

a From organization to June 13, 1888, Bureau of Labor; from June 13, 1888, to June 30, 1903, Department of Labor.

b The secretary of state is ex officio commissioner.

c Abolished by act approved July 23, 1875; reestablished by act approved April 23, 1885.

d From organization to June 30, 1889, Bureau of Labor and Industrial Statistics.

e From organization to April 2, 1892, Bureau of Agriculture, Horticulture, and Statistics.

f From organization to April 19, 1893, Bureau of Labor Statistics.

g From organization to March 23, 1893, Bureau of Labor Statistics.

h The governor is ex officio commissioner.

i From organization to February 7, 1901, Bureau of Labor Statistics.

j From organization to March 3, 1899, Bureau of Labor Statistics.

k From organization to May 11, 1874, commissioner.

l Abolished in 1898.

m Abolished by act of March 12, 1895.

n From organization to April 4, 1885, Bureau of Labor and Industrial Statistics.

It should be noted that two of the bureaus established (those of South Dakota and Utah) have been abolished and that the reports of one bureau (that of Kentucky) have not up to the present time related in any way to the immediate interests of labor. The department of labor and statistics of South Dakota, created in 1890, was abolished in 1898, no reports having been issued, while the bureau of statistics of Utah, created also in 1890, was abolished in 1895, but one report having been issued.

ORIGIN OF BUREAUS.

An examination of such data as are obtainable, relative to the earlier history of bureaus of labor in the United States and the causes leading to their creation and organization, reveals the fact that their existence in most of the States is due more or less directly to the efforts of organized labor. These efforts, however, were undoubtedly supplemented in most cases by those of business men, whose interests demanded accurate information as to labor conditions; by those of that portion of the general public which has displayed a growing interest in social, economic, and labor conditions, and by those of workingmen generally outside the ranks of organized labor. Through the courtesy of the State labor commissioners, who have furnished such data as were available, it is possible to give a brief statement relating to the inception and history of the movement for the establishment of bureaus of labor statistics in those States which now have such offices in active operation. An account of the steps leading to the creation of the Federal Bureau has been given on pages 973 to 975 and need not be repeated here.

STATE BUREAUS OF LABOR.

The California bureau was established as a result of the efforts of the laboring classes generally, led by organized labor, for the creation of a State department whose function it should be to collect and publish information of a statistical character pertaining to the various questions affecting labor and to the betterment of the workingman's condition.

The creation of the Colorado bureau was due entirely to the efforts of the labor organizations of the State, at whose request two bills looking to this end were introduced during the legislative session of 1885. The Knights of Labor, who were then very strong in the State, made every effort to secure the passage of an act establishing such a bureau, but the bills were never called up by the committee to which they were referred. In 1887, however, this organization succeeded in electing seven representatives to the legislature, and it was owing to the efforts of these members that a bill was introduced and enacted into law

A public demand for statistical information pertaining to labor resulted in the establishment of a bureau in Connecticut in 1873. This bureau was abolished in 1875, the ostensible reason being dissatisfaction with the conduct of the bureau and the unreliability of the reports published. In 1885 a renewal of popular demand for information, brought about largely by the increased influence of organized labor, led to the reestablishment of the bureau.

The establishment of the Illinois bureau is said to have been directly due to the demand of organized labor in that State for protective legislation for certain industries and to the desire of the representatives of business interests for trustworthy statistics. During the years immediately preceding the general assembly of 1879, there occurred a marked growth of labor organizations both in strength and numbers, due largely to the depression in industry at that time and to the resulting disturbance of economic conditions. These organizations succeeded in placing in the general assembly of 1879 four of their representatives, who demanded recognition of their constituency. Among other laws enacted directly in the interests of labor by this assembly was that creating the bureau of labor statistics.

The bureau of statistics in Indiana was organized by legislative enactment in 1879 for the purpose of supplying information of a statistical nature concerning the various social and economic subjects interesting labor and the industrial classes generally.

The specific causes leading to the establishment of the Iowa bureau were the demands of the Knights of Labor and other labor organizations for representation in the executive branch of the State government.

The bill creating a bureau in Kansas was introduced at the legislative session of 1885 by W. J. Buchan, a State senator. It is stated in the first annual report of this bureau that its creation was regarded as a concession to labor unions and that the appropriation made for its maintenance was very limited.

The specific object in establishing the Kentucky bureau was to develop the agricultural resources of the State and to give employment to labor and capital as well as to induce them to come to the State. The law creating the bureau was enacted before there had been much agitation of the labor question, but it has since been supplemented by a specific act having for its object the improvement of the condition of labor—protecting child labor and providing for the inspection of factories, etc.

The Louisiana bureau was established upon the earnest solicitation of the Central Trades and Labor Council, a central body composed of delegates from nearly all the labor organizations in the city of New Orleans.

The establishment of a bureau in Maine was due to a demand on the

part of labor organizations and of the laboring classes generally for statistical information pertaining to the great questions affecting labor and for representation in the affairs of the State.

The credit for the establishment of a bureau of labor statistics in Maryland belongs to District Assembly No. 41, Knights of Labor, which, in 1881, began an agitation in favor of the creation of such a bureau, and finally, in 1884, succeeded in having a measure enacted in the general assembly of the State providing for an office of this character. In 1892 the bureau was thoroughly reorganized and its reports changed from biennial to annual.

Agitation as to the hours of labor of workmen was begun as early as 1845 in Massachusetts through petitions to the legislature, and was continued until, in 1865, a commission was appointed to investigate the subject. In making its report, on February 7, 1866, "the annual collection of reliable statistics in regard to the condition, prospects, and wants of the industrial classes" was recommended. Later in that year, no action having been taken on this recommendation, another commission was appointed to investigate the same subject, and in presenting its report, on January 1, 1867, unanimously recommended that a bureau of statistics be established.

While the bureau was not established until two years later, the recommendations of these commissions and the further agitation for a shorter workday undoubtedly had their weight. The more immediate cause of the establishment of this—the first bureau of the kind created in the world—is attributed by the Hon. Carroll D. Wright to a necessity for the conciliation of very powerful labor interests in the State. The resolve creating a bureau was first introduced in the senate, but on its passage to a third reading was rejected. Later it was reconsidered, and after being amended in the house and again in the senate it finally passed and was approved by the governor June 23. The idea of such a bureau had been prominently before the public for three years and popular sentiment, if not particularly in favor of systematic investigation, was not adverse, so that the enactment of such a measure met with the quiet approval of the people generally.

The Michigan bureau was organized in 1883 at the earnest request of the working people that statistical information relating to the condition and needs of labor be furnished to the public. In 1893 factory inspection was made a part of the work of the bureau as a result of the efforts of organized labor and of labor in general. Coal-mine inspection also is now included in the work of the bureau.

The establishment of the Minnesota bureau was due to the efforts of members of labor organizations and to the action of members of the State legislature who were friendly to the interests of labor.

The Missouri bureau was established in response to the demands of the labor organizations of the State. The honor of projecting the

movement which resulted in the creation of the bureau is due to the Trades Assembly of St. Louis.

A provision for the creation of a bureau of agriculture, labor, and industry was incorporated in the State constitution of Montana, but the office was not organized until February, 1893. Its organization was not due to agitation by any particular interest, but was the logical outcome of public needs.

The Nebraska bureau was created in response to a demand on the part of the laboring people, the business interests, and the people generally, not only of Nebraska, but of other States as well, for statistical information regarding the resources of the State. The establishment of similar bureaus in other States hastened this action.

The enactment of the law creating the New Hampshire bureau is said to have been the outcome of the deep interest of the people of the State in the cause of labor. Organized labor took the lead in calling attention to the needs of the laboring classes, and in 1886, through the influence of the Knights of Labor, many representative workingmen and others favorable to their interests were elected to the legislature. During the succeeding years many laws were enacted for the benefit of the laboring people, and as a result of these laws and of a general awakening of the public to the needs of labor the bureau was created on March 30, 1893.

It can not be ascertained that labor organizations influenced directly the establishment of the New Jersey bureau. Interest in the subject of factory life created by the reports of the Massachusetts bureau, which had been established nine years previously, had much to do with it. The great railway strikes of 1877 strengthened general interest in the subject of the relations of capital and labor, and out of this sentiment grew a general demand for a bureau of this character. Its establishment does not appear to have been advocated by any particular group of men. Such unions as were in existence at that time were neither particularly powerful nor aggressive.

At the request of organized labor a bill providing for the creation of a bureau of labor statistics in New York was introduced in the State legislature in 1883, and passed without a dissenting vote in either branch. The act took effect May 4, and on that day the first commissioner was nominated and confirmed. In 1901 the three departments—bureau of labor statistics, department of factory inspection, and board of mediation and arbitration—were consolidated under the name of the Department of Labor.

The North Carolina bureau was established in 1887 through the efforts of labor organizations, which desired a department in the government of the State that should exercise supervision over the interests of the working people, and furnish to the public statistical information concerning their condition and their needs.

To M. A. Foran, president of the Coopers' International Union, is due the credit of the first practical effort toward establishing the Ohio bureau. As a delegate to the constitutional convention of 1873, he advocated an amendment to the constitution providing for the creation of a bureau of labor statistics, but his effort was unsuccessful. Three years later John Ferenbatch, who had been interested in the establishment of a bureau as early as 1870, and who was then president of the National Association of Mechanical Engineers, as a member of the State legislature introduced the bill creating the bureau. This bill passed the house of representatives by a large majority, but the legislature adjourned without action by the senate, and it was not until the following session that the bill was taken up and passed by that body, becoming a law on May 5, 1877.

The creation of a bureau in Oregon is stated to have been caused principally by the desire of organized labor for an office of this character in the State, the bill being passed by the legislature with but one dissenting vote.

The act creating the Pennsylvania bureau was passed in 1872, in response to the demands of labor. Upon the adoption of the new constitution in 1874, the bureau of statistics became a bureau in the department of internal affairs created by that act.

There was no specific cause which led to the creation of a bureau in Rhode Island, and the statement may fairly be made that this bureau was established as a result of a general public awakening to the importance of the labor question and a desire for statistical information pertaining to it.

The Tennessee bureau was established in response to a general demand for State supervision and inspection of coal mines and for the collection and publication of information of a statistical character pertaining to the mining and other industries of the State. It can not be said that any particular labor element was active in securing the passage of the act.

The bureau in Virginia was established in 1898 in response to the appeals of organized labor, supported by the mercantile, mining, and manufacturing interests of the State, the latter class being concerned in the enactment of the measure chiefly because the existence of such a bureau afforded a means of exploiting the industrial possibilities of the State.

The reason for the creation of a bureau of labor in Washington was the necessity of providing for the inspection of coal mines, factories, and other places where machinery is employed; also the demand for statistical information concerning the condition of the working classes. To organized labor is due the credit of creating popular sentiment in favor of the establishment of such a bureau.

The creation of the West Virginia bureau was due to the influence of organized labor, backed by a popular demand for statistical information pertaining to the great labor interests of the State.

The creation of a bureau of labor statistics in Wisconsin was strongly advocated by many of the citizens of that State for some years previous to 1881, but particularly in that and the following year. As the movement did not receive sufficient encouragement from the people of the State generally, no action favorable to the creation of such a bureau was taken by the legislature. In January, 1883, however, Governor J. M. Rusk recommended to the legislature the establishment of a bureau for the collection of statistics of agriculture and labor, and in accordance therewith a law was enacted providing for a bureau of labor and factory inspection, the law going into effect on April 3, 1883. In this, as in other States, the scope of the bureau's work has been broadened from time to time by amendments to the original act.

PERSONNEL AND FINANCIAL RESOURCES.

In considering the results accomplished by these offices the question naturally arises as to the means and facilities at their disposal for carrying out the oftentimes onerous duties required of them by law. To properly and successfully prosecute the work of collecting statistics requires not only experience, administrative ability, and a wide knowledge of the social and economic conditions of the working classes of a particular State on the part of the chief officer of its bureau, but also a trained staff of assistants and ample means to cover the traveling and other expenses connected with the gathering and compiling of data. Men already trained in practical statistical methods and economic work can not always be found to take charge of offices of this character, and in most cases these officers take up the work without previous experience, relying for success upon the experience gained month by month in the performance of the duties incident to the office. Under such conditions the longest possible tenure of office is essential to good work.

The chiefs of these bureaus are usually appointed by the governor of the State. The exceptions are found in Indiana, Kentucky, North Carolina, North Dakota, and Oregon, where they are elected by popular vote; in Kansas, where the chief is elected by a State society of labor and industry; in Pennsylvania, where he is appointed by the secretary of internal affairs; in Colorado, where the chief officer is appointed by the secretary of state, who is himself *ex officio* commissioner of labor, and in Illinois, where the chief officer is appointed by a board of five commissioners, who are themselves appointed by the governor of the State. The chief of the Federal Bureau of Labor is

appointed by the President of the United States. The employees of the various State bureaus are almost invariably appointed by the chiefs, while those of the Federal Bureau are, without exception, appointed under civil-service rules from the eligible lists of the Civil Service Commission.

The terms for which these chief officers are appointed vary in the different States from two to four years. In 19 of the 28 States, for which information was secured, appointments were made for terms of two years, and in the other 9 for terms of four years. The United States Commissioner of Labor is appointed for a term of four years. In many of the States, however, these officers have been retained in office beyond the terms for which they were first appointed, probably for reasons which have already been suggested. From information gathered in the early part of 1903 it appears that the chiefs of these bureaus have been retained longer than ten years in but five of the bureaus, the chief of the Federal Bureau having served nineteen years (the entire period of its existence), that of the Maine bureau sixteen years, that of the Massachusetts bureau fifteen, and those of the Rhode Island and Wisconsin bureaus ten years. In many of the States having the larger bureaus the service of the present chief has covered a much shorter period, the terms in these States being as follows: In Illinois, six years; in New Jersey, five years; in New York, Ohio, and Connecticut, four years; in Maryland, three years; in Michigan, Minnesota, and Missouri, two years; and in Pennsylvania, less than one year. Taking into consideration all the bureaus of the country, the average length of service of their chiefs is slightly over five years. Conditions in this respect are without doubt very much better now than at any time in the past, and it is becoming more and more recognized that the retention in these offices of men with the greatest possible degree of experience is absolutely essential to the best results.

With the exception of the Federal Bureau and several State bureaus, whose employees are appointed after competitive examination under civil-service regulations, in which cases a practically permanent tenure of office follows, the length of service of employees of these bureaus is dependent entirely upon the will of their chiefs and is usually measured by the length of service of the latter. In some of the State bureaus having small appropriations assistants are employed only during a portion of each year, the chief and his deputy being the only persons regularly engaged. It is safe to say that but few of the State bureaus are supplied with the funds necessary to secure and maintain an adequate corps of assistants. As before stated, conditions are very much improved as regards these important offices and more liberal appropriations are being made for carrying out their work, but many bureaus are still handicapped by insufficient provision of funds

for the employment of clerical and other assistants and for other necessary expenses. The following table affords information as to the salaries and length of service of the officers as well as the number of employees in each bureau and their salaries and length of service:

NUMBER, COMPENSATION, AND YEARS OF SERVICE OF OFFICERS AND EMPLOYEES.

[Not including employees engaged solely in service in factory inspection, mine inspection, or free employment offices.]

Bureau of Labor.	Commissioner.		Deputy commissioner.		Regular employees.			Temporary employees.	
	Annual salary.	Years of service.	Annual salary.	Years of service.	Number.	Average annual salary.	Average years of service.	Number.	Average annual salary.
United States.....	\$5,000	19	\$2,500	17	103	\$1,223	10.0		
California.....	3,000	4	1,800	4				3	\$1,040
Colorado.....	(b)	(b)	1,800	4					
Connecticut.....	2,500	4			2	1,200	3.3	(c)	1,250
Idaho.....	1,800	8							
Illinois.....	2,500	6			5	1,404	4.2		
Indiana.....	2,000	2	1,200	2				(c)	(c)
Iowa.....	1,500	1	1,000	3					
Kansas.....	1,500	6	1,200	4	1	720	2.0	(c)	(c)
Kentucky.....	2,500	1			(d)	(d)	(d)		
Louisiana.....	1,500	3			1	1,000	3.0		
Maine.....	1,500	16			1	800	16.0	(d)	(d)
Maryland.....	2,500	3	1,700	3	4	615	2.5		
Massachusetts.....	3,000	15			25	866	11.0		
Michigan.....	2,000	2	1,500	(d)	6	1,020	2.4	(c)	(c)
Minnesota.....	2,500	2	1,500	2	3	927	2.0		
Missouri.....	2,000	2			2	1,200	1.5	(c)	1,200
Montana.....	2,500	2			1	1,500	4.0		
Nebraska.....	(e)	(e)	1,500	1	2	920	1.5		
New Hampshire.....	1,500	4			1	1,000	3.0		
New Jersey.....	2,500	5	2,000	10	2	1,110	5.0	4	1,200
New York.....	3,500	4	2,500	2	22	1,550	2.0		
North Carolina.....	1,500	2	900	7	1	420	5.0		
North Dakota.....	2,000	2	1,500	1	1	600	1.0		
Ohio.....	2,000	4			5	848	4.6		
Oregon.....	1,800	1							
Pennsylvania.....	2,500	1			4	1,350	1.0		
Rhode Island.....	2,000	10			3	540	7.0		
Tennessee.....	1,800	4			1	1,000	(d)		
Virginia.....	1,200	3						(c)	(c)
Washington.....	1,800	6			1	600	(d)		
West Virginia.....	1,200	6	800	2	1	600	3.0		
Wisconsin.....	2,000	10	1,500	2	3	921	2.0		

a Acting Commissioner in absence of Commissioner.

b Secretary of State ex officio commissioner of labor.

c Varies.

d Not reported.

e Governor of State ex officio commissioner of labor.

f Two deputy commissioners.

The above table includes only the data pertaining to the officers and employees of the labor bureaus. In some of the States the work of factory and mine inspection and of the free-employment bureaus is placed under the charge of the commissioner of labor. The employees of these branches of the service are not included here, but the total annual expenditures on account of each of these branches are shown in the following table, which covers also the itemized annual expenditures of the bureau service itself:

ITEMIZED ANNUAL EXPENDITURES, EXCLUSIVE OF RENT AND PRINTING.

Bureau of Labor.	Bureau of Labor proper.						Factory inspection.	Mine inspection.	Free employment offices.	Grand total.
	Salaries.				Other.	Total.				
	Officers.	Clerical force.	Special agents.	Total.						
United States	\$7,500	\$97,636	\$31,750	\$136,886	\$35,326	\$172,212				\$172,212
California	4,800		(a)	b 4,800	c 2,500	7,300	(d)			7,300
Colorado	1,800			1,800	340	2,140				2,140
Connecticut	2,500	2,400	2,204	7,104	1,481	8,585			\$9,894	18,479
Idaho	1,800			1,800	600	2,400				2,400
Illinois	e 3,250	7,020		10,270	2,230	12,500		\$16,600	23,350	52,450
Indiana	3,200	1,490	1,958	6,648	1,677	8,325				8,325
Iowa	2,500			2,500	1,074	3,574	(d)			3,574
Kansas	2,700	720	800	4,220	2,300	6,520	(d)			6,520
Kentucky	2,500	(f)		(f)	(f)	10,800	\$2,200			13,000
Louisiana	1,500	1,000		2,500	1,000	3,500				3,500
Maine	1,500	1,000	600	3,100	400	3,500				3,500
Maryland	4,200	2,460		6,660	(f)	(f)	(f)		(f)	10,000
Massachusetts	3,000	19,250	2,400	24,650	4,100	28,750				28,750
Michigan	3,500	5,100		8,600	2,550	11,150	19,163	1,361		31,674
Minnesota	4,000	2,780		6,780	2,220	9,000	3,200			12,200
Missouri	2,000	2,400	581	4,981	1,733	6,714			6,439	13,153
Montana	2,500	1,500		4,000	2,300	6,300				6,300
Nebraska	1,500	1,840		3,340	1,350	4,690	(d)			4,690
New Hampshire	1,500	1,000		2,500	240	2,740				2,740
New Jersey	4,500	2,220	2,764	9,484	1,001	10,485				10,485
New York	8,500	28,760	5,340	42,600	g 28,400	g 81,000	44,400	(d)	5,000	130,400
North Carolina	2,400	420		2,820	680	3,500				3,500
North Dakota	3,500	600		4,100	1,000	5,100				5,100
Ohio	2,000	4,240		6,240	9,760	16,000			9,500	25,500
Oregon	1,800			1,800	800	2,600				2,600
Pennsylvania	2,500	2,400	3,000	7,900	6,000	13,900				13,900
Rhode Island	2,000	1,620		3,620	380	4,000				4,000
Tennessee	1,800	1,000		2,800	800	3,600		(d)		3,600
Virginia	1,200	364		1,564	396	1,960				1,960
Washington	1,800	600		2,400	700	3,100	(d)	2,125		5,225
West Virginia	2,000	600		2,600	1,000	3,600	(d)		(d)	3,600
Wisconsin	3,278	2,072		5,350	1,172	6,522	10,681		1,814	19,017

a Included in other expenses.

b Not including salaries of special agents.

c Including salaries of special agents.

d No special appropriation for this purpose. Service performed by officers of the bureau of labor.

e Including \$750 salaries of board of commissioners.

f Not reported.

g Including expenses of factory inspection, other than salaries.

h Salaries only; other expenses included in total for Bureau proper.

The figures in the above table in the case of each bureau relate to the last fiscal year for which data were obtainable. In a few cases in which the bureaus did not report expenditures it has been necessary to substitute appropriations instead on the assumption that in such cases the two were practically identical. The table shows clearly the amounts placed at the disposal of these bureaus to enable them to carry out the duties required of them by law and suggests in some cases at least the difficulty of securing reliable data for their reports and preparing the same for publication. With the exception of the Federal Bureau and those of half a dozen of the States, the lack of adequate financial means is most noticeable. A fair provision is usually made for the salaries of the chiefs of the bureaus, but in the majority of cases the provisions for clerical assistance, and especially for special agents to perform the work of investigation and special inquiry, are quite inadequate. In the bureaus of a number of States it is seen that no provision whatever is made for clerical or other assistance, while in the case of others but a few hundred dollars are available for the expenses

of investigation and the preparation of reports. Under such circumstances any attempt to cover the entire State or carry on any extensive statistical inquiry becomes impossible, and the work of many of the bureaus is therefore confined to the preparation for publication of such facts only as may readily be secured by correspondence or otherwise at little or no expense. While the generally acceptable character of the reports issued under such circumstances is surprising, it is to be regretted that appropriations are not always sufficiently large to render possible the same character of work as that performed by the bureaus of certain of the States whose legislators are disposed to regard the work and functions of their labor bureaus as important and worthy of generous financial aid. Excluding the Federal Bureau from consideration, it is seen that the total expenditure for salaries of officers in the 32 State bureaus was \$87,528, or an average of \$2,735.25 in each bureau.

As has been seen in a previous table, the amounts given for each bureau cover in most cases the salaries of the chief and a deputy. In some cases these amounts cover only the salary of the chief, no deputy being provided for, while in the New York bureau the amount given covers the salaries of the chief and two deputy commissioners. The previous table shows these salaries in detail. In 5 of the States no provision whatever is made for clerical assistance, while in 14 others less than \$2,000 is appropriated for this purpose. Between \$2,000 and \$3,000 is provided in the case of 7 other States, and it is thus shown that of the 32 State bureaus, 26 have less than \$3,000 each available for its clerical force while but 5 have above that amount, one bureau having made no report on this point. A still greater need is seen for provision for special agents, without which it is practically impossible for a bureau to secure facts from original sources with any degree of confidence in their correctness. In 22 of the States no provision whatever was made for the employment of special agents; in 3 of the remaining States less than \$1,000 was available for this purpose; in 5 other States between \$1,000 and \$3,000 was available; in 1 State making provision for special agents the amount available was not reported, while an expenditure of over \$3,000 was made in but 1 State. A like condition is found when the column relating to other expenditures is examined. This column includes the numerous contingent expenses such as those for traveling, expressage, postage, telephone service, etc. Inasmuch as the printing for these bureaus is usually not charged against their appropriations, and as they usually occupy quarters in some State building, items for these expenses have been omitted in the table in the few instances where they existed. As will be seen in the table, the duties of factory and mine inspection are frequently performed by these heavily burdened bureau officers,

no appropriation for the thorough compliance with the provisions of the laws in this respect having been made. In other States provision more or less adequate is made for this work as well as for the work of conducting free employment offices.

The figures for the Federal Bureau show a total expenditure of \$172,212, exclusive of that for rent and printing. A total of \$11,821 is expended for these items, \$6,750 being for rent of offices, \$750 for rent of storage rooms, and \$4,321 for miscellaneous printing and binding. The expense of printing and binding the regular editions of the reports and bulletins of the Bureau is paid out of the general printing fund of the Government, no part of which is included in the above amount. The grand total of expenditures for the Federal Bureau, including those for rent and printing, are thus shown to be \$184,033. The proportion expended on account of salaries (\$136,886) classified as to that going for services of officers, of clerks, and of special agents is shown in the table. The "other expenditures," amounting to \$35,326, are made up of \$30,272 expended for per diem in lieu of subsistence for employees on field duty, their traveling expenses, the traveling expenses of officers and employees, the purchase of articles for publication in the Bulletin of the Bureau of Labor, etc.; \$1,000 for the purchase of books and periodicals; \$1,000 for the purchase of stationery; \$450 for the payment of postage to Postal Union countries, and \$2,604 for furniture, carpets, ice, gas, telephone service, telegrams, repairs to furniture, etc.

DUTIES OF BUREAUS AND THEIR OFFICERS.

The duties devolving upon these bureaus or their officers are in almost every instance set forth by the law in a general way in the following words: "To collect, assort, arrange, and present in reports, statistical details relating to all departments of labor in the State, especially in relation to the commercial, industrial, social, educational, and sanitary condition of the laboring classes, and to the permanent prosperity of the productive industries of the State."

In 31 of the 32 States having bureaus, the substance of the above general definition of their duties appears on the statute books. In some of the States no further direction is given as to the scope of the work to be carried on. In most of the States, however, more definite and specific directions are given as to the special matters that shall constitute the subject of their reports. These cover a wide range of subjects, many of which are but remotely, if at all, connected with the interests of the laboring classes. It may be interesting to note the character of these subjects and the extent to which they severally appear in the proposed work of the bureaus of the various States as given by the laws. It should be kept in mind, however, that many of the specific subjects enumerated have been taken up by bureaus under

the general provisions of law given above, although they do not appear as subjects concerning which they are specifically required to investigate and report. It should be remembered also that for various reasons, such as lack of funds, etc., some of the bureaus have so far found it impossible to cover every subject specifically mentioned in their respective organic acts.

The following is a partial list of the subjects of most vital interest to the laboring classes employed in factories, workshops, etc., which are specially recommended for investigation by the laws of the various States, together with the number of States involved:

SUBJECTS OF SPECIAL INTEREST TO LABOR, CONCERNING WHICH STATISTICS AND INFORMATION ARE REQUIRED TO BE COLLECTED AND PUBLISHED.

Subjects.	States.
Wages of labor	13
Hours of labor	10
Cost of living	4
Relations between capital and labor	10
Operation of labor-saving machinery in its relation to hand labor	3
Number employed in each industry	7
Nativity of workmen	4
Savings of workmen	4
Number of workmen renting homes and rents paid	4
Number of unemployed and causes of idleness	2
Number and character of accidents to workmen	4
Cooperation	5
Strikes and lockouts, their causes, etc.	11
Trade unions and other labor organizations	10
Sanitary conditions of factories, shops, etc.	6
Influence of various occupations and the use of intoxicating liquors on the health and mental condition of the working classes	3
Chinese—their number, habits, conjugal condition, occupations, wages and earnings, cost of living, etc.	3

The investigation of the above subjects, together with such others of a similar character as may be made under the general provisions of law which have already been mentioned, may be considered as among the most important duties of a bureau of statistics of labor, so far as the collection and publication of statistics are concerned. Many of these bureaus, however, are required to investigate and report on a variety of other subjects. The collection and publication of statistics and information relative to manufacturing and industrial interests are required of the bureaus of 18 States. In at least 3 of these States such statistics are required in great detail, and provision is made for covering a wide range of inquiries connected with the subject—such as kind of goods made, number of partners or stockholders, capital invested, kind and value of raw materials used, quantity and value of articles manufactured, number of employees distinguished as to age and sex, wages paid, weeks in operation, and other facts necessary to show the condition of labor and business in these industries.

In some of the States, notably Kentucky, Idaho, and North Carolina, the work required of these bureaus relates largely to agricultural and allied industries. The collection and publication of statistics of this character are required by the laws of 11 States. In addition to data

of a general nature, relative to the agricultural resources of these States, special requirement is made for statistics and information as to the kind and value of crops, live stock, and other agricultural products, the value and area of farm lands, the various kinds of soils and their use, and adaptability for various crops, irrigation, etc. The law of Kentucky requires, among other things, that the efforts of the bureau of agriculture, labor, and statistics shall be directed to the promotion of agriculture, horticulture, etc., in that State, and that the commissioner shall promote and encourage the organization of agricultural and horticultural societies and other associations in the various counties thereof. It is provided that the commissioner shall send properly qualified and equipped persons into those parts of the State in which information is most needed by the farmers in order to give lectures on agricultural matters and distribute literature. The commissioner is authorized also to offer and pay premiums to encourage the agricultural industries of the State, to distribute such seeds as the United States Government may desire to introduce into the State, to have analyzed the soils in different parts of the State, to furnish crop reports to the newspapers for publication, etc. The law of Idaho, similar in many respects to that of Kentucky, makes it the duty of the commissioner of labor to keep in his office for exhibit samples of the productions of the State, including grains, grasses, fruits, vegetables, minerals, manufactured articles, and other products. He is also required, whenever practicable, to organize and encourage local exhibits at such points as will tend to advertise the resources of the State, and, wherever funds are available for such purposes, make or cause to be made, exhibits of the products and industries of the State at such industrial and international exhibitions in other States as the governor shall direct. In this State as well as in Kentucky and Montana the encouragement and promotion of immigration is made a duty of the commissioner of labor.

Statistical and other information relating to the mining industry is required of the commissioner of labor by the laws of 10 States—production, resources, etc., are specifically mentioned. The laws of 5 States require reports as to their material resources; those of 3 as to their commercial and business interests; those of 6 as to their railroads and other means of transportation; those of 2 as to their water power, water supply, etc.; those of 2 as to their timber lands and timbers, etc. Among the other subjects of investigation mentioned are penal institutions in 6 States; assessed valuation of property in 1; population in 2; exports and imports in 1; public roads in 1; the number and value of schoolhouses, churches, and charitable institutions in 2; education in 2; vital statistics in 2, etc.

The duties of bureaus of labor and their officers are limited in many States to the collection, preparation, and dissemination of information relating to the subjects mentioned above. In other States these duties

are extended to cover other and quite as important features of State activity. The inspection of factories, workshops, etc., is more or less under the direction and supervision of these bureaus in 13 States—Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, Oregon, New York, Tennessee, Washington, West Virginia, and Wisconsin; inspection of hotels, lodging houses, etc., in 2 States—Nebraska and Wisconsin; inspection of elevators in 2 States—Missouri and Wisconsin; and inspection of mines, collieries, etc., in 2 States—Michigan and Tennessee. Inspection of factories, etc., has not been established by law in California and Maryland, but the commissioners of labor of these and other States have been assigned the duty of enforcing the laws for the protection of life, health, etc., in factories and the laws regulating the employment of women and children. The enforcement of the laws of Ohio regulating convict labor has been made a duty of the commissioner of labor in that State, while the enforcement of the laws of New York regulating the sale of convict-made goods has likewise been delegated to the commissioner of labor of the State. In at least 2 States—Massachusetts and Rhode Island—the work of taking the State census is under the direction of the commissioner of labor. In 9 States—Connecticut, Maryland, Michigan, Missouri, Nebraska, New York, Ohio, West Virginia, and Wisconsin—free public employment offices have been organized and established by the bureaus of those States, and are carried on under their direction and as a part of their work. Provision is made in the law of Montana for the publication by the bureau of labor of the transactions of its free public employment offices, but no further connection is established between the two services. Mediation in industrial disputes under certain circumstances is made a legal duty of the chiefs of the bureaus in Colorado and New York, while in other States the services of these officers are frequently offered with a view to bringing about arbitration, although such duty is not required by law.

It is thus seen that compliance with the laws in each State involves investigation by these bureaus on widely varying subjects and that but little uniformity exists, so far as the directions for specific investigations are concerned. Full compliance with the intent of these laws in this respect has been impossible in many States in which inadequate provision has been made for the expenses of investigation. An effort will be made further along in this paper to show in a general way the character and scope of the work actually performed by these bureaus.

The duties devolving upon the Federal Commissioner of Labor may best be described by quoting from the organic act of the Bureau, although it should be stated that frequent directions for reports on specific subjects have been given by Congress since the date of that act, which reads in part as follows:

That the Commissioner of Labor, in accordance with the general design and duties referred to in section one of this act, is specially

charged to ascertain, at as early a date as possible, and whenever industrial changes shall make it essential, the cost of producing articles at the time dutiable in the United States, in leading countries where such articles are produced, by fully specified units of production, and under a classification showing the different elements of cost, or approximate cost, of such articles of production, including the wages paid in such industries per day, week, month, or year, or by the piece, and hours employed per day, and the profits of the manufacturers and producers of such articles, and the comparative cost of living, and the kind of living. "It shall be the duty of the Commissioner also to ascertain and report as to the effect of the customs laws, and the effect thereon of the state of the currency, in the United States, on the agricultural industry, especially as to its effect on mortgage indebtedness of farmers;" and what articles are controlled by trusts, or other combinations of capital, business operations, or labor, and what effect said trusts, or other combinations of capital, business operations, or labor have on production and prices. He shall also establish a system of reports by which, at intervals of not less than two years, he can report the general condition, so far as production is concerned, of the leading industries of the country. The Commissioner of Labor is also specially charged to investigate the causes of, and facts relating to, all controversies and disputes between employers and employees as they may occur, and which may tend to interfere with the welfare of the people of the different States, and report thereon to Congress. The Commissioner of Labor shall also obtain such information upon the various subjects committed to him as he may deem desirable from different foreign nations, and what, if any, convict-made goods are imported into this country; and if so, from whence.

LEGAL POWERS AND METHODS OF INVESTIGATION.

Two most important features to be considered in connection with the efficiency of the work of these bureaus are the extent of powers conferred by law on their chiefs for securing the data upon which their reports are based and the methods adopted in the collection of the same. An examination of the laws of the various States in which bureaus of statistics of labor have been created discloses that quite generally an effort has been made by the legislatures to clothe the officers of these bureaus with at least a degree of authority. No powers whatever are conferred on bureau chiefs in the States of Connecticut, Idaho, Illinois, Maryland, New Hampshire, North Carolina, and Rhode Island. In Kentucky the only power of this kind given by law is that which permits inspectors to enter any factory, workshop, or other place where labor is employed, when open and in operation, in the performance of the duties required by law. In the remaining States having bureaus, however, a more or less considerable degree of authority is conferred. In 9 States the bureau officers are empowered to send for persons and papers; in 14, to issue subpoenas; in 22, to examine witnesses under oath; in 17, to administer oaths in the performance of their duties; in 10 to require full and complete answers, under oath, to any inquiries

made of any individual, corporation, etc., and in 5, to take depositions, or cause the same to be taken by others authorized by law to do so. Provision is made in a few States that witnesses shall not be required to leave the vicinity of their residences or places of business, and that they shall be paid fees of varying amounts for attendance.

In addition to the above, the officers of these bureaus are empowered in 13 States to enter any factory, workshop, or other place where labor is employed, when open and in operation, in the performance of the duties required by law. In a considerable number of States various State, county, and municipal officers are required to furnish all the information in their power when called upon. In some States, however, no penalties whatever are imposed for failure to comply with the preceding requirements of the laws. This is true of 11 of the States having bureaus, while varying penalties are imposed in the remaining ones. In 13 States any owner, lessee, agent, or other person in charge of any factory, workshop, etc., who refuses entrance to the officers of the bureau is subject to a fine ranging from \$25 to \$500, or, in some cases, to the alternative of imprisonment of not exceeding thirty days, ninety days, and in one instance six months. In 16 States similar punishment is provided for persons neglecting or refusing to furnish statistics or information when called upon; in 11 States, varying penalties are imposed on persons neglecting or refusing to obey any summons or subpoena and testify; while in 6 States even greater penalties are imposed on persons who may testify falsely or answer untruthfully in regard to inquiries made by the bureau officers. On the other hand the laws of at least 7 States provide penalties for the disclosure by bureau officers of the names of persons or firms furnishing information or statistics. It is thus seen that in some States no specific authority or powers in the way of securing information or making investigations are conferred on the officers charged with these duties, while in other States no penalties are provided for refusal to make answer, testify, or afford these officers the facilities necessary to effectively perform their duties. In a considerable number of the States, however, these officials are given adequate legal powers and compliance with the law enforced by well-defined penalties.

Inquiry as to the experience of the various bureaus regarding the enforcement of these provisions, requiring compliance on the part of the public with the requests of their officers for information, has resulted in the information that while the laws have been tested in but few cases, they have proved quite effective. In at least three States where cases of infraction of the law have been brought before the courts the laws have been held constitutional, while in one State, under the decision of its attorney-general, the law is invalid. In any event the officers of these bureaus are dependent to a large degree upon the good will of those with whom they are brought in contact in the performance of their duties, and it is believed that recourse to prose-

cution for refusal to cooperate with them would, in most cases, fail in securing entirely trustworthy data. Information given and service rendered willingly and from motives of public duty are much more trustworthy and desirable than when furnished under threat of prosecution. In one State in which certain manufacturers neglected or refused to report certain facts which were requested, the bureau officers deemed it unwise to institute suit, believing that the moral influence of the law would finally accomplish the desired end. The Commissioner of the Federal Bureau has no power whatever under the law to enforce compliance with his requests for information from workingmen, employers of labor, or others, and yet, in an experience of nineteen years as the chief of the Bureau, he has never failed to secure the information desired. The pledge always given of the confidential treatment of any data furnished and the appeal for compliance with requests for information solely on the ground of public duty have proved uniformly successful.

Two methods of investigation are open to bureaus such as these engaged in statistical inquiries. The first consists in correspondence with the persons, corporations, etc., from whom information and figures are desired or in mailing to them printed schedules of inquiries, the answers to which are to be inserted by them. The second consists in personal investigation by the officers or special agents of the bureau. The first of these methods is the one in most common use by the State bureaus, owing to the small expense connected with the collection of information in that manner. Its general use, however, is due almost solely to the fact that the small appropriations of the bureaus for special service in the way of the collection of information renders impossible the adoption of any other method. While this method has met with a degree of success in some States it is open to very grave objections. The negligence or unwillingness of those to whom inquiries are sent, even when the inquiries are fully understood, produces invariably more or less incomplete results and data, which are in a great degree inharmonious and unreliable. At the second annual convention of the officials of these bureaus in 1884 a committee appointed for the purpose of ascertaining and suggesting the best methods for the collection of statistics reported unanimously in favor of the gathering of statistics by special agents instead of by means of correspondence. In the discussion of the systems in vogue the report states that the chief merit of the blank or circular system lies in the fact that it is the only feasible method in most cases, owing to small appropriations. The report continues as follows:

The blank or circular system is open to the objection that it compels the bureau to propound questions to a witness with whom it has no personal relations, and of whom, in the great majority of cases, it has no personal knowledge. If the witness be a willing one, he often mistakes the meaning of some of the questions propounded, and his misapprehension leads to answers which are either totally at variance with

or repugnant to the real nature of the question. If the witness, from any cause, be an unwilling one, he answers the least important questions only, thereby necessitating the sending by the bureau to him of a duplicate blank, accompanied by a reminder of his failure to comply with the law.

In many cases the persons to whom the blanks are furnished answer the questions fully, but fail to return the blanks until, as they think, sufficient time has elapsed to render them worthless. If the blank system is to be preserved, it should be made efficient by the passage of stringent laws, enlarging and unmistakably defining the coercive powers of the bureau when acting on behalf of the Commonwealth in the collection of statistics. The important point in gathering statistics is that they be reliable. The most that can be said in favor of the blank system is that you can not prove that they are not reliable.

Since the date of the report just quoted, greater powers have been conferred quite generally on the officers of these bureaus, and although the legal authority to compel the production of books and papers and require attendance and testimony under penalty of fine or imprisonment has been used in but few cases, the moral effect of the laws conferring these added powers, the growing confidence in the work of the bureaus, and the better understanding of their aims have gradually removed some of the obstacles to success with the first method of investigation. The entire success of the method, however, can not be expected, as many of the obstacles indicated are not due to the unwillingness of those from whom information is sought, but are inherent in the system itself.

The second method, as has been stated, consists in personal investigation and inquiry by the officers or agents of the bureaus. This method, which has been used in almost all of the investigations conducted by the Federal Bureau, may best be explained and its advantages indicated by describing its operation in that Bureau. The subject of investigation having been determined upon, the officers of the Bureau first give their best thought to a preliminary study of the subject, and then use the most painstaking care in the preparation of a schedule of inquiries which shall cover every essential feature concerning which information is desired. Quite as much care is also taken in the preparation of the instructions to the agents who are to be assigned to the work of collecting the data called for by the schedule. These instructions are designed to cover every inquiry on the schedule and meet every condition that may be encountered by the agents after they have actually begun the work in the field. The printed instructions are supplemented very often by verbal explanations. In the case of the investigation of subjects of a technical nature a preliminary tentative canvass of a few weeks is made before the schedule is finally adopted, for the purpose of ascertaining any imperfections or omissions. Having divided the territory to be covered into convenient assignments, the Bureau furnishes each agent with a supply of the blank schedules and assigns him to some particular city, locality, or

State. The agent proceeds to his assignment and makes a personal visit to the individuals, firms, organizations, etc., from which information is desired. He makes clear the meaning of each inquiry and inserts the reply on the schedule, afterwards verifying and testing the results in any way that may be possible. In the case of wage statistics, for instance, a transcript is made directly from the pay rolls, while in the case of statistics of strikes, both the employer and the employees are interviewed, the results of the combined information being inserted on the schedule. Wherever possible such information is verified by written or printed records. Any inconsistencies in the replies to inquiries are thus noted at once and immediate effort is made to remove them by further inquiry and investigation.

Completed and perfected schedules are mailed to the headquarters of the Bureau as rapidly as secured or at frequent intervals, according to the character of the work in hand, and when received are stamped, dated, and recorded. They are then placed in the hands of a corps of trained examiners, whose immediate duty it is to verify all calculations and discover any errors or inconsistencies which may appear. If none are found the schedule is filed for use when the tabulation is taken up. Should errors or inconsistencies be found in a schedule, it is returned to the agent who secured it with an appropriate letter of instructions for verification or correction. Imperfect schedules are thus returned to the agents while the latter are in the locality in which the schedules were secured, and where access may readily be had to the original sources of information as an aid in making the desired corrections. This method of investigation has many obvious advantages, and although the officers and agents of the Federal Bureau are not clothed with any legal powers whatever, information has seldom been refused after an explanation of the objects of the inquiry and the pledge of confidential treatment of the data given have been made.

An inquiry made by the writer as to the experience of the chiefs of the State bureaus with the two methods emphasizes the obvious advantages of the personal method of investigation. Of the thirty bureaus from which information was secured, both methods of investigation were in use in all except one, which had never used the personal method. The personal method was without exception declared to be the better, and in many cases very strong objections to the system of correspondence or circular blanks were expressed, the latter system being pronounced in most cases unsatisfactory and in some cases utterly worthless. It is stated by one of the most important State bureaus that the method of direct collection by special agents is preferred and is used in all important investigations; in routine work, as in the collection of statistics of manufactures upon a uniform basis every year, blanks are used, supplemented by agents' work in case of delinquents. Another important bureau reports that less than one-half of the information desired can be secured by correspondence. Still another bureau,

whose work is largely of a routine nature, after having established confidential relations with the manufacturing and other industrial interests of the State, succeeds in collecting satisfactorily by correspondence about 70 per cent of its schedules. In one important bureau an objection to the personal method is found in the inefficiency of special agents who are appointed solely for political reasons. The objection is well taken, as the success of the personal method depends greatly on the character of the agents employed. Integrity, intelligence, experience, tact, and many other good qualities in the agents assigned to the collection of data are essential to the best results under this method.

CHARACTER AND SCOPE OF ACTUAL WORK DONE.

The character and the scope of the investigations prescribed for these bureaus by the laws creating them have been shown in a general way under a preceding caption. The record of their actual accomplishments, however, as shown by an examination of their reports and other publications, is perhaps a matter of even greater interest. Before taking up the enumeration of the subjects covered by the reports of these offices it may be of interest to gain an adequate idea of the great volume of the statistical and other material which has been placed at the disposal of the public through their efforts. The following table shows for the Federal Bureau and that of each State maintaining an office of this character, the number of reports and other publications which have been issued up to the end of the year 1903, the frequency of issue of these reports, and the number regularly distributed:

NUMBER OF REPORTS AND OTHER PUBLICATIONS ISSUED BY LABOR BUREAUS PRIOR TO DECEMBER 31, 1903.

Bureau of labor.	Frequency of issue of regular reports at present.	Number of copies of reports regularly distributed.	Number of reports issued.				
			Annual reports.	Biennial reports.	Special reports.	Bulletins.	Total.
United States.....	Annually...	25,000	17		12	19	78
California.....	Biennially...	3,000		8	1		10
Colorado.....	Biennially...	2,000		7		1	8
Connecticut.....	Annually...	8,500	20			1	21
Idaho.....	(a)						
Illinois.....	Biennially...	3,000		11	19	230	260
Indiana.....	Biennially...	5,000	6	8		21	35
Iowa.....	Biennially...	4,000		10			10
Kansas.....	Biennially...	8,000	16	1		1	18
Kentucky.....	(a)						
Louisiana.....	Annually...	500	1				1
Maine.....	Annually...	4,000	16			1	17
Maryland.....	Annually...	1,000	11	4			23
Massachusetts.....	Annually...	6,000	32		16	28	76
Michigan.....	Annually...	4,000	20				24
Minnesota.....	Biennially...	3,000		7			7
Missouri.....	Annually...	4,000	24				24
Montana.....	Biennially...	3,500	6	2			8
Nebraska.....	Biennially...	1,000		8	2	2	12
New Hampshire.....	Biennially...	1,500	2	4		1	8
New Jersey.....	Annually...	3,600	23		1		24
New York.....	Annually...	7,500	19		2	19	40
North Carolina.....	Annually...	6,000	15				15

^a None issued.

^b Reports issued to date do not relate to labor.

NUMBER OF REPORTS AND OTHER PUBLICATIONS ISSUED BY LABOR BUREAUS PRIOR
TO DECEMBER 31, 1903—Concluded.

Bureau of labor.	Frequency of issue of reg- ular reports at present.	Number of copies of re- ports regu- larly dis- tributed.	Number of reports issued.				Total.
			Annual reports.	Biennial reports.	Special reports.	Bulle- tins.	
North Dakota.....	Biennially..	1,500		7	1		8
Ohio.....	Annually....	5,000	26			10	36
Oregon.....	(a)						
Pennsylvania.....	Annually....	2,000	30				30
Rhode Island.....	Annually....	3,000	16				16
Tennessee.....	Annually....	300	10				10
Virginia.....	Annually....	4,000	4				4
Washington.....	Biennially..	2,000		3			3
West Virginia.....	Biennially..	3,000		5			5
Wisconsin.....	Biennially..	1,200		9			9
Total.....		126,100	814	94	59	373	840

a None issued.

An almost complete set of the above reports, as well as those relating to factory inspection, form a part of the exhibit of the Federal Bureau of Labor at the Louisiana Purchase Exposition. The eighteenth annual report of the Bureau is in the hands of the printer and will soon be issued. Of the edition of 25,000 copies of the annual reports 5,000 are distributed by the members of the Senate of the United States, 10,000 by the members of the House of Representatives, and 10,000 by the Bureau itself. Reprints of the annual as well as the special reports and bulletins are frequently made, greatly augmenting the number regularly distributed. The special reports of this Bureau are issued at irregular intervals, while the bulletins appear every two months. Of the latter about 20,000 copies are regularly distributed, but the edition may be increased as necessity demands to as many as 40,000.

In connection with the above table it should be stated that no reports later than the year 1902 have been included, and in some few cases reports for 1901 are omitted. These omissions are due to the fact that the missing reports had not been printed and distributed prior to December 31, 1903. In the table no account has been taken of the numerous issues of the labor laws of the different States published in pamphlet form from time to time by these bureaus. The number of copies of special reports and bulletins issued is not given in the table. It may be stated in passing that of the special reports of the Illinois bureau, which relate to coal mining and its free employment offices, an edition of 6,000 is published, while of the bulletins which relate to its free employment offices, 200 are published and distributed weekly; of the bulletin of the Maryland bureau an edition of 1,000 copies is issued; of the special reports of the Massachusetts bureau which relate to manufactures, an edition of 5,000 is printed, while of the bulletins, issued quarterly, an edition of 1,200 is authorized; the Nebraska bureau publishes each year an edition of 10,000 of a bulletin on the industries and resources of the State, and an edition of 15,000 of its crop report; the New York bureau publishes an edition of 7,500 each
its annual reports on mediation and arbitration and factory inspec-

SUBJECTS COVERED BY REPORTS OF STATE LABOR BUREAUS AND NUMBER OF REPORTS
IN WHICH EACH SUBJECT IS TREATED—Concluded.

Maryland.	Massachusetts.	Michigan.	Minnesota.	Missouri.	Montana.	Nebraska.	New Hampshire.	New Jersey.	New York.	North Carolina.	North Dakota.	Ohio.	Pennsylvania.	Rhode Island.	Tennessee.	Utah.	Virginia.	Washington.	West Virginia.	Wisconsin.	Total.	Marginal number.
		2											2								8	74
1	1	1		8	3	4					4		1	1			1	1		1	13	75
1	1	1	1	1	1	1	1	1	1			1	1	1							10	76
3	1	5	2	7	4	3	1	5	1	2	2	1	8		4						9	77
3	1	1	1	1	1	1	1	1	1	3	2	6	9								19	78
	1	1			3	1															55	79
	2				1	1						1	4	5			1	1		1	91	80
																					11	81
																					2	82
																					36	83
																					7	84
1	1						1					1	2								3	85
1	1	1			1	1	1	3				1	1	2							7	86
		1							9											1	27	87
2	7	3		2	2	2	1	10	2			6	3	5							6	88
9	10	11	8	12	3	4	3	6	20			8	13	5	5				3	3	151	89
	2		1																		3	90
5										2		2	1								10	92
1											5	1	11								16	93
3	2	2		1	5	1	2	1	5			3	5								49	94
	4					7	4	1	6	12	7	6	16	8	3		1	2			70	95
3	11	6	2	6	1	2	1	20	15	7	1	2	2	2	4		3		1	2	130	96
	6																				29	97
	2	1						6	1		4	1	1	5	2			1			27	98
5	21	15	2	13	7	4	2	14	13	13	1	21	17	5	2		3	2	1	8	232	99
	1	1		1		1			2	1		2			1		1				15	100
2	10	5	1	1				1	4			7	1	1				1			9	101
																				1	57	102

The reports of the Federal Bureau of Labor have not been included in this table, but a statement of the subjects covered in its reports and bulletins is given in connection with a description of the working of the Bureau by Commissioner Wright, under another caption.

A careful examination of the subjects enumerated in the foregoing table shows that much of the work of these offices in the various States is devoted to the collection and dissemination of information concerning matters but remotely, if at all, connected with the interests of labor. Among these may be enumerated statistics and information relative to the defective and dependent classes, and asylums, hospitals, and charitable institutions; criminal statistics; statistics of births, deaths, etc.; census statistics of population; statistics of agriculture; the production and acreage of farms and stock raising; financial statistics in general and those relating to the public debt, mortgages, assessed valuation of property, taxation, etc.; statistics of education and of newspapers; election returns, franchises, etc. These offices are the general statistical offices of the States, and as such are unable to devote their entire time and efforts to the investigation and study of the questions especially pertaining to the interests of the working classes. The effort is made, however, to study these questions as carefully as is possible with the small appropriations at the disposal of the bureaus, and it is only fair to say that so far as can be seen their work is usually performed and their reports made with entire fairness and impartiality. It has generally been assumed by the bureaus that their duty consists in the collection and publication of information that would be of value in the solution of social problems, and that it is no part of their work to solve the problems themselves. This attitude was clearly stated by Commissioner Wright, the chief of the Federal Bureau, in an address before the Seventh Annual Convention of Chiefs of Bureaus of Labor, as follows:

The bureaus are not solving great labor or economic problems, but they are contributing most important information and presenting it without bias. It is not our business to seek or offer solutions; it is our business to collect information and present it impartially and fearlessly to the public.

This is without question the only position that can be maintained successfully and result in the confidence of all classes of citizens.

RESULTS.

In summing up the practical results of the work of these bureaus it can not be doubted that their influence has contributed in a large measure to the betterment of industrial conditions. It is always difficult to measure accurately the influence of the various forces that are working simultaneously for reform in any field, and as regards the special field covered by these bureaus there is no exception to the rule.

**SUBJECTS COVERED BY REPORTS OF STATE LABOR BUREAUS AND NUMBER OF REPORTS
IN WHICH EACH SUBJECT IS TREATED.**

Maryland.	Massachusetts.	Michigan.	Minnesota.	Missouri.	Montana.	Nebraska.	New Hampshire.	New Jersey.	New York.	North Carolina.	North Dakota.	Ohio.	Pennsylvania.	Rhode Island.	Tennessee.	Utah.	Virginia.	Washington.	West Virginia.	Wisconsin.	Total.	Marginal number.
18	50	18	6	18	7	7	6	23	81	14	7	29	29	14	9	1	3	3	4	9	401	1
2	2	2	2	1	1			1	1			8	2		6		1	1	1	3	28	2
1	1	1	1				2	2				1	1	1						36	3	
1	1	1	1									1	1	1						3	4	
4	4	4	4		7	7	6	8	2	6	7	1	6	1		1		3	2	3	99	5
4	4	4	4		2	2	1	1	1	1		8	1	1				1	1	1	8	6
	5	1		1									1	1						39	7	
2	1	1	2	2		2		3			2	1	4							14	5	
1	3	5	1	4		1	1	13	2	1		5	2	1			2		1	39	6	
3	3	2	3		2			4				1	2	2			1	2		29	10	
	4	1	2	2	2	1	2	3	4	8		2	1	1			1		2	40	12	
1	3	3	3	2	1			1	1			2	1							54	11	
4	4	5	3	3	3	1	2	8	4	1	4	2	3	5		1		1	1	1	15	
1	1	4	4	3	4	1	2	2	2			4	1	2						35	16	
1	1	2	4		6	1	1	1	1		4	1	3					2		48	17	
2	2	5	3	8	5	5	2	2	2	1		2	7	1		1				52	18	
4	4	3	3	1	11	3	2	8	1	1	1	5	1				2	3		10	20	
2	1	1	1	3	3	2		12	1			7	1							41	21	
4	2	13	3	1	5	6	1	2	12	2		6	6	2					1	68	22	
2	2	5	9		6	1						2	6							2	24	
	1	1	3		7	3	2	2	2			1	4			1	2	1		3	92	
5	5	1	1	1	6	1	1	1	1			5	4			1	2			1	26	
3	2	1	1	1	7	3	2	2	2			1	4			1	2	1		1	18	
1	1	1	1	1	2	2	1	1	1			4	4	2			2	1		33	27	
6	6	2	3	1	3	1	1	3	1	1		1	5	1			1	1		45	28	
	1	1	1	1	2	2	1	1	1			1	4	1			2	1		36	30	
3	2	1	1	1	3	1	1	1	1			1	1	1			1	1		21	31	
1	1	1	1	1	5	4	3	2	16	1		17	3	3						15	32	
6	6	2	3	1	2	2		1	1			3	3	2			2			65	33	
	1	1	1	1	4	3	1	2	3	10	3	1	3					1	1	55	34	
1	1	2	3	2	7	7	1	4	1	12	6	3	3	2	1	1				37	35	
6	6	2	3	1	2	2		1	1			1	1							31	36	
	1	1	1	1	2	2		3	2			4	1					3		61	37	
1	1	11	2					5	3			5	1							2	4	
4	4	1	1		2	2		1	1			1	1	1						25	40	
1	1	13	5	3	2	2	1	4	3	13	1	1	1							21	41	
2	2	2	5	4	2	2	1	2	2			2	2	1						24	42	
1	1	2	2	3	1	1	1	1	3			4	1					3		3	43	
6	6	17	6	1	7	3	4	20	17			10	5	6	3		3		2	3	157	
	1	15	7	2	6	5	3	1	2			4	1	2			1	2		1	25	
1	1	1	1	1	3			2	5	2		1	2				1			49	56	
5	5	1	1	1	7	3		2				2	5				1		1	21	57	
1	1	1	1	1	2	7	3	2	2	2	7	2	1			1	3			6	58	
5	5	1	1	1	3	2		1	2	2		2	3							1	11	
1	1	1	1	1	5	6	5	14	3	11		6	21	25	1	5	3	2	4	9	31	
5	5	9	12	2	12	7	3	2	2	1	4	4	16	18	6	1	1	2	3		208	
2	2		1	1	1	1		1	1	2		2	6		9	1	4			1	25	
1	1			2	6			1		10	8	5	5		3		1	1	2		134	
																				1	69	
2	2	6	7	3	2	1	3	11	4	14		8	9	6					1	6	112	
	3	3						1	1			1	3	2	1			1			28	
		1	7					4	1			6	3								32	
													2								72	

**SUBJECTS COVERED BY REPORTS OF STATE LABOR BUREAUS AND NUMBER OF REPORTS
IN WHICH EACH SUBJECT IS TREATED—Concluded.**

Marginal number.	Subjects covered,	California.	Colorado.	Connecticut.	Illinois.	Indiana.	Iowa.	Kansas.	Louisiana.	Maine.
74	Proceedings of societies, associations, etc.	...	...	...	...	...	...	3	...	1
75	Products marketed, amount and value of	...	...	...	...	...	...	...	...	...
76	Property values, personal	...	...	...	...	...	...	...	...	...
77	Pullman inquiry	...	...	...	1	...	1	...	...	...
78	Quarrying, etc., industries	...	...	...	...	...	...	...	...	7
79	Railroads and street railways, statistics of	1	1	...	1	13	4	5	...	3
80	Railway and street-railway labor	...	3	3	2	...	4	10	1	10
81	Roads, public	...	...	...	...	5	...	...	...	...
82	Salt industry	...	...	...	...	...	...	1	...	...
83	School statistics	1	1	...	1	11	...	...	...	...
84	School teachers, clergymen, etc., earnings and expenses of	...	...	...	...	...	1	...	...	1
85	Seamen	...	...	...	...	...	...	...	...	...
86	Shoe industry	...	...	...	...	...	...	...	...	...
87	Shorter workday	2	3	3	1	...	...	1	...	...
88	Socialism, communism, etc.	...	...	...	...	...	2	...	...	...
89	Special investigations	4	...	6	6	2	2	3	...	2
90	Strikes and lockouts, boycotts, etc.	2	4	6	4	2	4	7	1	3
91	Sunday labor	...	...	...	...	...	...	...	...	...
92	Sweating system	1	...	...	1	...	...	...	...	...
93	Tannery industry	...	...	...	...	...	...	...	...	1
94	Taxation	...	1	2	2	9	3	3	...	...
95	Textiles	...	...	1	...	2	...	...	...	14
96	Trade unions and other labor organizations	3	3	10	2	2	3	10	1	2
97	Unemployment	...	3	...	...	...	...	1	...	...
98	Vital and health statistics, trade life of workingmen	...	...	...	...	8	...	...	...	...
99	Wages, hours of labor, earnings, etc., of employees	6	4	10	7	7	7	14	1	7
100	Water, gas, and electric-light plants	...	...	1	2	1	...	...	...	...
101	Wealth, distribution of, coinage statistics, etc.	...	...	...	...	1	...	...	...	...
102	Working women	3	3	1	1	3	3	4	...	2

BUREAUS OF STATISTICS OF LABOR IN FOREIGN COUNTRIES.

BY G. W. W. HANGER.

The first official bureau established in Europe for the special purpose of collecting and disseminating statistical and other information in regard to labor was the Direction du Travail, Ministère du Commerce, de l'Industrie, des Postes, et des Télégraphes of France on August 19, 1891. In the United States a bureau of statistics of labor had been created in 1869 by the State of Massachusetts, and that office stands to-day as the oldest bureau of this character in the world. Many of the other States of the United States had followed in the steps of Massachusetts and established bureaus of a similar character, 26 being in existence at the time of the creation of the bureau in France. The United States Government itself had established a Federal bureau of labor in 1884, thus being the first National Government to create a bureau of statistics of labor. Great Britain followed France, establishing in 1893 a labor department under the board of trade, while of the other European countries, Spain established a bureau in 1894, Belgium in 1896, Austria in 1898, Germany, Italy, and Sweden, in 1902, and Norway in 1903. In addition to the above countries in which offices were created for the special services usually required of bureaus of statistics of labor, a number of the other countries of Europe had established general statistical bureaus which, to a greater or less degree, included among their duties the collection and publication of statistics of labor. Among these may be mentioned the central statistical office in Denmark, which was established in 1895, and that of the Netherlands, established in 1899. It should be stated, however, in this connection that in many of the countries mentioned a certain degree of attention had been given to the collection and publication of labor statistics previous to the creation of the bureaus which are devoted to this special service. In Germany, for example, a commission for labor statistics (*Kommission für Arbeiterstatistik*) had been created in 1892, to make investigations relative to subjects of interest to the laboring classes, and in Great Britain a special service was rendered through the labor correspondent of the board of trade as early as 1886, while in other countries commissions had been appointed from time to time for the purpose of making special investigations similar in character to those usually undertaken by bureaus of statistics of labor.

In addition to the above-mentioned countries, the list of foreign governments having labor bureaus comprises New South Wales, New



of collecting and disseminating statistical and other information in regard to labor was the Direction du Travail, Ministère du Commerce, de l'Industrie, des Postes, et des Télégraphes of France on August 19, 1891. In the United States a bureau of statistics of labor had been created in 1869 by the State of Massachusetts, and that office stands to-day as the oldest bureau of this character in the world. Many of the other States of the United States had followed in the steps of Massachusetts and established bureaus of a similar character, 26 being in existence at the time of the creation of the bureau in France. The United States Government itself had established a Federal bureau of labor in 1884, thus being the first National Government to create a bureau of statistics of labor. Great Britain followed France, establishing in 1893 a labor department under the board of trade, while of the other European countries, Spain established a bureau in 1894, Belgium in 1896, Austria in 1898, Germany, Italy, and Sweden, in 1902, and Norway in 1903. In addition to the above countries in which offices were created for the services usually required of bureaus of statistics of labor, a number of the other countries of Europe had established general statistical bureaus which, to a greater or less degree, included among their duties the collection and publication of statistics of labor. Among these countries are mentioned the central statistical office in Denmark, which has been modeled after that of the Netherlands, established in 1880, and which should be mentioned, however, in this connection as a country which has attained a certain degree of attention to the collection and publication of labor statistics. In the collection and publication of statistics of labor, which are devoted to this purpose, the only international commission for labor statistics has been created in 1892, and its object has been to interest to the laboring classes the general public, and to render through

Zealand, Canada, and Ontario.^a A bureau having similar duties is found also in Switzerland, but it is not under Government control, although it receives a subsidy therefrom.

An account of the various foreign bureaus and a list of their publications, so far as information could be secured, will be found in the following pages. Digests of the important official publications are a regular feature of the bimonthly Bulletin of the Bureau of Labor. Special acknowledgment is made of the courtesy of the officers of the various bureaus in furnishing valuable information concerning the offices under their direction.

AUSTRIA.

By virtue of an imperial decree of July 21, 1898, a bureau of labor statistics was established at Vienna under the ministry of commerce (*Arbeitsstatistisches Amt im k. k. Handelsministerium*). A bill for the creation of such a bureau had been presented to the Parliament in 1894, but had failed to become a law. Under the above decree of the Emperor, however, the active operation of the bureau began October 1, 1898. The regulations determining its functions provide that the bureau shall collect, systematize, and periodically publish all information pertaining to the statistics of labor. This work is to have regard to the condition of the laboring classes, taken in its broadest sense, especially of those engaged in manufactures and trade, mining, agriculture and forestry, and commerce and transportation; to the efficiency of the institutions and laws designed to promote the welfare of the workingman, and to the extent and conditions of production in the industries mentioned.

To facilitate the work of the bureau and to secure the effective cooperation of various interests, by the imperial decree the bureau of labor is directed to seek the cooperation of the State and communal authorities, boards of trade and chambers of commerce, workingmen's accident insurance institutions, trade unions, arbitration courts, and other workingmen's institutions, and these bodies in turn are directed to render all necessary assistance to the labor bureau in carrying out its work.

Under the same decree and regulations there was established at the same time a permanent labor council (*Ständiger Arbeitsbeirath*), whose duty it is to "act as an advisory body to the labor bureau, and especially to promote harmonious relations between the bureau and the manufacturers or other persons with whom the former comes in contact in the prosecution of its work." This council was constituted on September 25, 1898, and has reported on several bills in the interest

^a A letter, dated August 17, from Perth, Western Australia, signed T. F. Davies, clerk of the court of arbitration, states that a department of labor is now in course of inauguration in that State, the minister of labor being J. B. Holman, esq.

of the working classes, which have been enacted into law. The permanent labor council, which under the original decree consisted of 32 members, has been augmented under a later decree to 40 members. Ten of these represent the labor bureau and other government offices as follows: The director of the bureau and his chief assistant, the president of the statistical central council, the president of the council of hygiene, and one representative each of the ministers of the interior, justice, finance, agriculture, railroads, and commerce. The remaining 30 members are appointed for a term of three years by the minister of commerce, of whom one-third must be employers of labor, one-third workingmen, and one-third persons whose technical knowledge renders desirable their cooperation in the work of the council. No salaries are paid these 30 members, but those living outside Vienna are allowed a per diem of 8 gulden (\$3.25) and their traveling expenses when on duty, while the workingmen members residing in Vienna are allowed a per diem of 5 gulden (\$2.03) for each day's attendance.

The personnel of the bureau consists of the director and his assistant, 7 officers of the staff of the ministry of commerce, 8 technical assistants, and 40 clerks. The salaries of these officers and employees are fixed in accordance with the various ranks attained by them in the Government service. The total appropriation for the last fiscal year for carrying on the work of the bureau was 179,750 crowns (\$36,489.25).

In addition to its regular work the bureau, under the law of January 21, 1902, took an industrial census of the Empire. A monthly bulletin, "Soziale Rundschau," is published regularly by the bureau, an edition of 3,000 copies being printed. In addition to this bulletin, annual reports have been issued relative to strikes and lockouts, the work of the labor bureau, overtime work in factories, and other subjects, of which editions of from 1,000 to 1,500 copies have been printed. The printing of the bulletin and other publications is paid out of the appropriation of the bureau, at an expense of 34,000 crowns (\$6,902).

In collecting data this bureau makes use of both the personal and the correspondence methods, according to the character of the investigation in hand. While no legal powers have yet been conferred on the officers of the bureau to enable them to enforce their requests for information, a bill has been introduced in the Parliament with that end in view.

Dr. Victor Mataja, who has been the director of the bureau since its creation, reports as one of the important results of its work the regulation of the statistical reports of employment agencies.

The following publications have been issued by the Austrian labor bureau since its organization:

REGULAR PUBLICATIONS.

The Social Review. (*Soziale Rundschau.*) Monthly bulletin; first number was for January, 1900.

Strikes and Lockouts in Austria. (*Die Arbeitseinstellungen und Aussperrungen in Österreich.*) Annual report; first report was for the year 1897. Reports for 1894 to 1896 were published by the statistical department of the Austrian ministry of commerce.

Report of the Operations of the Imperial Bureau of Labor Statistics in the Ministry of Commerce. (*Bericht über die Tätigkeit des k. k. Arbeitsstatistischen Amtes im Handelsministerium.*) Annual report; first report was for the year 1900.

Extension of Hours of Labor (Overtime) in Factories. (*Arbeitszeit-Verlängerungen (Überstunden) in fabrikmässigen Betrieben.*) Annual report; first report was for the year 1900.

The Wages of Mine Workers and Overseers. (*Die Löhne der Arbeiter und Aufseher beim Bergbau.*) Published annually as part 4, vol. 2, of the statistical yearbook of the imperial ministry of agriculture; first report was for the year 1901.

REPORTS OF SPECIAL CONFERENCES, COMMITTEES, ETC.

Report of the Conferences of the Secretaries of the Chambers of Commerce and Industry of Countries Represented in the Austrian Parliament, Regarding the Trade Registers, the Next Statistical Quinquennial Report of these Chambers, and the Statistics of Trade Associations, held in Trieste, October, 1898. (*Protokoll über die im Oktober 1898 in Triest abgehaltenen Beratungen der Sekretäre der Handels- und Gewerbekammern der im Reichsrate vertretenen Königreiche und Länder, betreffend die Gewerbekataster, den nächsten statistischen Quinquennalbericht dieser Kammern und die Genossenschaftsstatistik.*) 122 pages. 1899.

Instructions Regarding the Keeping of the Trade Registers and the Taking of the Industrial Census by the Chambers of Commerce and Industry. (*Instruktion, betreffend die Führung der Gewerbekataster und die Vornahme von Gewerbezahlungen durch die Handels- und Gewerbekammern.*) 28 pages. 1899.

Report of the Conference of the Secretaries of the Chambers of Commerce and Industry on the Methods of Cooperation of these Chambers in taking the Industrial Census in Connection with the Next Census of Population, held at Vienna, May, 1900. (*Protokoll über die im Mai 1900 zu Wien abgehaltene Beratung der Sekretäre der Handels- und Gewerbekammern, betreffend die Modalitäten der Mitwirkung dieser Kammern bei der Durchführung der an die bevorstehende Volkszählung anzugliedernden allgemeinen Betriebszählung.*) 55 pages. 1900.

Minutes of the Sessions of the Permanent Labor Council. (*Sitzungsprotokolle des ständigen Arbeitsbeirathes.*) Sessions 1 to 5, 416 pages, 1900; Sessions 6 and 7, 219 pages, 1901; Sessions 8 to 10, 170 pages, 1902; Sessions 11 to 13, 291 pages, 1902; Sessions 14 to 16, 541 pages. 1903.

Stenographic Report of the Examination of Witnesses on Conditions in the Garment-Making Industry, held in the Imperial Bureau of Labor Statistics. (*Stenographisches Protokoll der im k. k. Arbeitsstatistischen Amte durchgeführten Vernehmung von Auskunftspersonen über die Verhältnisse in der Kleider- und Wäschekonfektion.*) 791 pages. 1899.

Report of the Conference on Statistics of Labor Employment Agencies and on the Plan for Annexing to the General Employment Institutions Agencies for Securing Information concerning Dwellings and Workshops, held June 27 and 28, 1901. (*Protokoll über die am 27. und 28. Juni 1901 abgehaltene Konferenz, betreffend die Ausgestaltung der Arbeitsvermittlungs-Statistik und das Projekt der Angliederung einer Wohnungs- und Werkstättenvermittlung an die allgemeinen Arbeitsnachweis-Anstalten.*) 135 pages. 1901.

Stenographic Report of the examination of Witnesses on Conditions in the Shoemaking Trade, held in the Imperial Bureau of Labor Statistics. (*Stenographisches Protokoll der im k. k. Arbeitsstatistischen Amte durchgeführten Vernehmung von Auskunftspersonen über die Verhältnisse im Schuhmachergewerbe.*) 740 pages. 1904.

OTHER PUBLICATIONS.

Communications of the Imperial Bureau of Labor Statistics. (*Mitteilungen des k. k. Arbeitsstatistischen Amtes.*) No. 1.—Laborers in the Imperial Navy (*Die Lohnarbeiter der k. u. k. Kriegsmarine*), 76 pages, 1900; No. 2.—The Labor Conditions at the Lloyd Arsenal and the Trieste Technical Establishment (*Die Arbeitsverhältnisse im Lloydarsenale und Stabilimento tecnico triestino*), 97 pages, 1902; No. 3.—Domestic Service and the Law of Domestic Service in Austria (*Gesindewesen und Gesinderecht in Österreich*), by Dr. Hugo Morgenstern. 1st Part: Historical Survey. Statistics and Economic Condition of Servants (*Geschichtlicher Überblick. Statistik und wirtschaftliche Lage des Gesindes*). 215 pages. 1902.

Results of the Industrial Census of Austria taken June 1, 1897. (*Ergebnisse der in Österreich vorgenommenen Gewerbebeziehung nach dem Stande vom 1. Juni 1897.*) 381 pages. 1899.

Classified List of Trades and Other Industrial Occupations for Statistical Use by the Chambers of Commerce and Industry in the Countries Represented in the Austrian Parliament. (*Systematisches Verzeichnis der Gewerbe und anderer gewerbemässig ausgeübter Beschäftigungen für statistische Zwecke der Handels- und Gewerbekammern in den im Reichsrate vertretenen Königreichen und Ländern.*) Second revised edition, 147 pages. 1900.

The Protection of Labor in Contracts for Public Works and Supplies. Report of the Imperial Bureau of Labor Statistics on the Efforts Made and of the Laws and Regulations Enacted by European and Transmarine Countries. (*Der Arbeiterschutz bei Vergabung öffentlicher Arbeiten und Lieferungen. Bericht des k. k. Arbeitsstatistischen Amtes über die auf diesem Gebiete in den europäischen und überseeischen Industriestaaten unternommenen Versuche und bestehenden Vorschriften.*) 163 pages. 1900.

Compilation of Decisions of Imperial Industrial Courts. (*Sammlung von Entscheidungen der k. k. Gewerbegerichte.*) (Supplement to Soziale Rundschau.) Two vols. Issued by the Imperial Ministry of Justice. Vol. I, 224 pages; Vol. II, 208 pages. 1900, 1901.

Habitation and Sanitary Conditions of Home Workers in the Garment-Making Industry. (*Die Wohnungs- und Gesundheitsverhältnisse der Heimarbeiter in der Kleider- und Wäschekonfektion.*) 125 pages. 1901.

Social Betterment Institutions of Employers for the benefit of their Employees in Austria. (*Die Wohlfahrtseinrichtungen der Arbeitgeber zu Gunsten ihrer Angestellten und Arbeiter in Österreich.*) Part 1. Social Betterment Institutions of Railways. (*Wohlfahrtseinrichtungen der Eisenbahnen.*) No. 1.—Private Railways (*Privat-Eisenbahnen*), 249 pages, 1902; No. 2.—Social Betterment Institutions of the Austrian Imperial State Railways (*Die bei den k. k. österr. Staatsbahnen bestehenden Wohlfahrtseinrichtungen*), 124 pages, 1903. Part 2. Social Betterment Institutions in Industrial and Commercial Establishments. (*Wohlfahrtseinrichtungen der gewerblichen und Handelsbetriebe.*) 423 pages. 1904.

Hours of Labor in Mercantile Establishments other than Retail Stores. (*Die Arbeitszeit in Handelsbetrieben mit Ausschluss des Detail-Warenhandels.*) 123 pages. 1903.

Changes in Trade Conditions during the Two Periods 1898-99 and 1899-1900. (*Veränderungen im Stande der Gewerbe während der beiden Perioden 1898 1899 und 1899 1900.*) 452 pages. 1903.

The Condition of Watchmen in the Employ of the Imperial State Railways. (*Die Lage der Wächter der k. k. Staatsbahnen.*) 94 pages. 1903.

Labor Conditions in the Ostrau-Karwin Coal District. (*Arbeitsverhältnisse im Ostrau-Karwiner Steinkohlenrevire.*) Part I.—Hours of Labor, Efficiency, Wage and Income Conditions (*Arbeitszeit, Arbeitsleistungen, Lohn- und Einkommensverhältnisse*). 763 pages. 1904.

BELGIUM.

The first step toward the creation of a bureau of labor (*Office du Travail*) in Belgium was the royal decree of November 12, 1894, in which provision was made for an office of this character as a part of the ministry of agriculture, industry, and public works, which in consequence was denominated the ministry of agriculture, industry, labor, and public works. After providing for the framing of regulations to govern the organization of the bureau, its duties were indicated as follows:

1. To collect, systematize, and publish all information relating to labor, particularly as regards the state and development of production, the organization and remuneration of labor, its relations with capital, the condition of workmen, the comparative situation of labor in Belgium and foreign countries, labor accidents, strikes, unemployment, the workings of the laws that specially concern industry and labor.

2. To cooperate in the study of new legislative measures and amendments to be made to the legislation already in force.

3. To see to the execution of the laws relating to labor within the limits fixed by the regulations for the organization of the bureau.

The regulations governing the organization of the bureau were approved by a royal decree of April 12, 1895. An adequate conception of the duties and functions prescribed for this important bureau can best be gained by a reading of this decree, which is as follows:

ROYAL DECREE OF APRIL 12, 1895, ORGANIZING THE BUREAU OF LABOR.

ARTICLE 1. In addition to the administrative offices enumerated in article 1 of the organic regulation of December 31, 1889, the department of agriculture, industry, labor, and public works shall include a bureau of labor.

ART. 2. It shall be the duty of the bureau of labor, upon the request of a competent branch of the Government, to inquire into the state of industrial and agricultural labor, as well as the condition of the working people in manufacturing, the trades, commerce, agriculture, and transportation; to inquire likewise into the effects of the laws and regulations relating to such working people, and, in general, to gather all information that may contribute to the betterment of their material, intellectual, or moral condition.

It shall devote itself especially to the following subjects:

The economic and commercial condition of the different branches of labor.

The state of the labor market for the different trades; unemployment, its causes, duration, and effects, and the means of remedying it, including insurance.

The condition of the workmen and apprentices of both sexes as regards wages and methods of remuneration, length of workday, days of rest, conditions of employment and discharge, and other clauses of the labor contract.

The cost of living, the budgets of the different classes of workingmen and working women.

The retail prices of the articles and commodities ordinarily used by the great mass of the public.

The influence of taxes upon the income, consumption, and conditions of the working class.

The number of labor accidents in each trade, the severity of injuries, duration of the [resulting] inability to work, age and civil condition of the victims, and the physical and moral causes of accidents.

Disease among the different classes of laborers, according to age, sex, and trade, especially diseases arising from the nature of the occupation, from food conditions, from the abuse of alcoholic beverages.

The number of workingmen annually rejected by the army authorities for insufficient stature, bodily defects, or weak constitution.

The number of workingmen annually sent to almshouses, houses of refuge, reformatories, and prisons of the State.

Industrial disputes between employers and workingmen; their frequency, causes, courses, results, and consequences.

The working of public and private institutions for promoting harmonious relations between employers and workingmen, such as conciliation boards, factory boards, arbitration, councils of industry and labor, and councils of prudhommes.

The working of laws respecting the labor of women and young persons, wages, shop regulations, the labor contract, and, in general, of all statutory provisions which constitute obligatory clauses of the labor contract.

The results of measures and regulations concerning the sanitation and safety of workshops.

The condition of working people as to housing, the effects of the law relating to workingmen's dwellings, the activities of committees of patronage, the development and operations of companies for the building of workingmen's dwellings.

The state and development of associations of employers, of workmen, and of mixed associations.

The state and development of mutual benefit societies, and the working of the law relating to them.

The state, development, and different modes of insurance against sickness, accidents, invalidity, old age, as well as of insurance of widows and orphans.

The condition and development of saving in the different parts of the country, and among different classes of workingmen.

The condition and development of cooperative associations, and the working of the law relating to them.

The extent and results of industrial and trade instruction, and of instruction in housekeeping.

The condition of apprenticeship in the different industries and trades.

The effects of measures taken for the relief of suffering.

The results of measures relative to the condition of labor, adopted by certain public administrations (minimum wage, length of workday, premiums, boards of conciliation, participation in adjudications, accident insurance, etc.).

The state of industry, conditions of production, state of labor, cost of living, emigration, colonization, strikes, etc., in foreign countries.

ART. 3. The bureau of labor is intrusted with the duty of studying

and making known the movement of legislation concerning labor and laborers abroad, and of investigating the effect of such foreign legislation. It shall cooperate in the study of new legislative measures, and amendments to be made in existing legislation concerning labor.

ART. 4. The bureau of labor shall have among its functions the administrative service relative to the execution of the laws and regulations respecting the following subjects, within the limits and under the conditions to be fixed by departmental regulations:

The councils of industry and labor.

The councils of prudhommes.

The superior council of labor.

The payment of wages.

The regulation of workshops.

The labor contract.

Apprenticeship.

Workingmen's insurance.

Trade unions.

Mutual benefit associations.

Labor inspection.

ART. 5. Independently of the officials and clerks necessary in the offices of the bureau, and included on the rosters of the central administration of the department, the minister shall have power to entrust specially defined work to temporary agents.

ART. 6. The bureau of labor shall publish monthly an official bulletin under the title of *Revue du Travail*. This review shall contain, in particular, information on the state of the labor market, unemployment, industrial disputes between employers and workingmen, begun, ended, or in progress; arrangements for regulating new working conditions; resolutions passed by councils of industry and labor; labor accidents, and judicial decisions rendered under statutory provisions as to responsibility; measures taken by the public authorities with reference to the healthfulness and safety of industrial establishments; the construction of workingmen's dwellings; the development of mutual insurance cooperation, and saving; industrial, trade, and housekeeping instruction; conventions of labor organizations, and the work of bodies occupied with social questions.

The bulletin shall also furnish summary information on the fluctuations of trade, exportation, and importation, when they occur, the effects of colonization, retail prices of articles and commodities ordinarily used by working people, as well as comparative tables of wholesale prices in the leading markets of the world. Finally, it will include notes on the principal events affecting labor and on the progress of labor legislation in Belgium and in foreign countries.

ART. 7. The bureau of labor shall publish separately the results of special investigations undertaken in accordance with article 2, as well as reports on labor legislation in foreign countries and its results.

ART. 8. The minister shall determine, according to article 19 of the organic regulations of the department, the powers to be accorded the chief of the bureau, with the view of facilitating the directive work and the dispatch of business.

ART. 9. There shall be created in the government of each province a provincial bureau of labor. The governors shall determine, in the regulations of their respective administrations, the organization of the

provincial bureaus of labor and the various functions to be exercised by them.

ART. 10. The minister of agriculture, industry, labor, and public works is charged with the execution of the present decree.

The constantly increasing requirements of the various services committed to the bureau of labor very shortly led to the division of the ministry of agriculture, industry, labor, and public works into two ministries, one of which was made to comprise agriculture, hygiene, and public works, and the other industry and labor. The new ministry (*Ministère de l'Industrie et du Travail*) was created by royal decree of May 25, 1895, and upon it devolved the functions relative to industry and labor which formerly appertained to the ministry of agriculture, industry, labor, and public works.

As may be seen by reading the organic decree of April 12, 1895, the bureau of labor is engaged not only in the collection and preparation of labor statistics—its functions are much broader. The bureau is in charge of a director-general, who has under him officials charged with specific duties. By a ministerial decree of January 2, 1897, the work of the bureau was divided into five sections, as follows:

1. Statistics.
2. Legislation and interpretation of laws and decrees.
3. Enforcement or execution of laws and decrees.
4. Inspection of labor and of establishments designated as dangerous and unhealthy.
5. Provident institutions.

There is also a general service comprising the library, bookkeeping department, etc.

The force employed in all of these services comprises 53 officials and clerks of all grades (not including laborers) at the central office and 21 officials performing duty in the provinces (inspectors of labor), or a total of 74 persons. Special inquiry relative to the personnel of the section of statistics has elicited the information that it comprises one chief of section and one chief clerk, both appointed by the King and receiving respectively salaries of 6,500 francs (\$1,254.50) and 4,600 francs (\$887.80); three editors, appointed by the minister, receiving 2,200, 3,000, and 3,600 francs (\$424.60, \$579, and \$694.80), and four clerks, appointed by the minister, receiving 1,200, 1,400, 1,600, and 2,400 francs (\$231.60, \$270.20, \$308.80, \$463.20). Three of the members of this section, including the section chief and the chief clerk, have been in the service of the bureau since its creation, while the remaining members, with one exception, have served but one year each. One of the so-called editors is charged with the duties of a special agent, receiving in addition to his salary a special compensation and being reimbursed for his traveling expenses. It should be stated that no appointments whatever are made by the director-general of

the bureau. According to the rule in force in all the ministerial departments the officers beginning with the grade of chief clerk and those above that grade are appointed by the King, while the employees below the grade of chief clerk are appointed by the minister. The term of office is indefinite.

It may also be noted that under article 5 of the organic decree of April 12, 1895, independently of the officials and clerks regularly provided for, the minister has power to intrust specially defined work to temporary agents. Much of the work of the bureau has been done under the provisions of this article—the monographs which compose the series of volumes devoted to domestic industries in Belgium, five volumes of which have appeared and two of which are in preparation, having been prepared under the control and in accordance with the instructions of the bureau of labor by a temporary agent who was not attached to the service.

There exists also a corps of 17 labor correspondents located in various districts who supply the greater part of the information contained in the monthly bulletin. The bureau assumes no responsibility for the statements or reports of these correspondents. They are furnished with certificates signed and attested by the director of the labor bureau, showing their quality as labor correspondents in their respective districts, but they can exercise no authority in the collection of information and must depend entirely upon the good will of their informants. They receive a fixed compensation as correspondents and a rate per line for articles and other correspondence sent in and published. A small allowance is also made for expenses.

Each correspondent is required to make a monthly report to the bureau on the condition of the labor market in each of the leading industries in his district, the report to consist of a statement of all changes in the economic condition of each industry, such as production, labor supply and demand, changes in wage rates, hours of labor, etc., a statement of changes in employers', employees', and mixed associations, and a statement of the selling prices of the principal commodities consumed by working people. In addition to these regular monthly reports the correspondents are also expected to make, whenever the occasion arises, reports on mutual benefit organizations, cooperative societies, cases of conciliation and arbitration, acts of local authorities in the interests of the working people, improvements in housing conditions, the creation of trade and housekeeping schools, the operations of labor exchanges, wayfarers' lodges, etc. The information is in all cases required to be obtained at first hand.

The appropriations for the ministry of industry and labor for the year 1903, as shown by the *Moniteur Belge* for August 28, 1903, amounted to a total of 19,696,500 francs (\$3,801,424.50), of which 16,493,400 francs (\$3,183,226.20) were for the expenses necessary for conducting the work of the bureau of labor and for the enforcement

of the laws with which that office is charged. The following statement shows to some extent the special purposes for which the appropriations to the bureau of labor were made:

Appropriations for Belgian Bureau of Labor for the fiscal year 1903.

LABOR.

Bureau of labor: Statistics, commissions, printing; publications, purchase and binding of books and documents specially intended for the use of the bureau of labor; compensation for district labor correspondents; miscellaneous expenses.....	\$17,370.00	
Committees of patronage: Expenses relative to the execution of the law of August 9, 1889; subsidies.....	8,685.00	
The expenditures on account of the provident funds of mutual aid societies; subsidies to Congress in relation to provident institutions; personnel and miscellaneous expenses of the permanent commission instituted for the purpose of facilitating the examination of the affairs of mutual aid societies; expenditures on account of the awarding of special decorations; encouragement of useful works relating to questions concerning provident institutions and measures for the advancement of the affiliation of these institutions; subsidies for the purchase of flags; miscellaneous expenditures.....	67,550.00	
Councils of prudhommes: Compensation of notaries; revision of electoral lists; compensation of the personnel of local commissions.....	6,446.20	
Superior council of labor: Salaries of secretaries; miscellaneous expenditures.....	5,790.00	
Inspection of labor in dangerous or insanitary establishments: Inspection personnel; compensation and office expenses; traveling expenses and per diem....	46,320.00	
Inspection of labor in dangerous or unhealthful establishments: Inspection material; expenses for experiments; purchase of instruments; miscellaneous expenditures.....	2,895.00	
		\$155,056.20

PARTICIPATION OF THE STATE IN THE CREATION OF OLD-AGE PENSIONS.

Contribution to the special pension fund for the creation of old-age pensions (art. 11 of the law of May 10, 1900, modified by art. 8 of the law of Feb. 18, 1903).....	\$2,895,000.00	
Subsidies to mutual aid societies recognized as having for their object the affiliation of their members in the general retirement fund (art. 12 of the law of May 10, 1900).....	77,200.00	
Expenses of administration relative to the execution of the law of May 10, 1900: Subsidies to committees of patronage for the housing of the working people, to appeal commissions, and to other institutions invited to cooperate in the application of the law.....	34,740.00	
		\$3,006,940.00

SPECIAL EXPENDITURES.

Subsidies to the provident fund for the relief of victims
of labor accidents instituted by the law of July 21,

1890	\$21, 230. 00
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	3, 183, 226. 20
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It will be noted that a large proportion of the total amount appropriated for the expenses of the bureau is for contributions to pension funds, for subsidies of various kinds, etc. The total amount of the above, which is paid on account of salaries to officials and employees of the bureau in 1903 has been stated to aggregate 256,874 francs (\$49,576.68). This sum was distributed among the 74 officials and employees who, as has been previously stated, constituted the personnel of the bureau in all its sections.

The duties committed to the Office du Travail and its officers have been shown very clearly in the decree of April 12, 1895, which has already been reproduced. In matters of statistical information no special powers to enable them to enforce their requests for data are given to the bureau, to its officers, or to its agents. An exception was made with regard to the general census of industries and trades, which was taken in 1896 in compliance with the law of June 29, 1896. The regulations which were to be observed in taking this census, and the obligations of individuals called upon for the information deemed to be necessary, were fixed by royal decree. The law above referred to provided that individuals who did not fulfill such obligations should be liable to a fine of from 1 to 25 francs (19.3 cents to \$4.83), or to imprisonment from one to seven days, or to both. In case of the refusal of individuals to conform to the rules prescribed it was provided that they might be enforced by judicial process and at the cost of the persons proceeded against.

As has been indicated in the preceding pages the Office du Travail is charged with important duties aside from the collection and dissemination of statistics. The very complete system of factory inspection in Belgium is largely under the direction of this bureau. The entire scheme for the inspection and regulation of dangerous and unhealthful establishments and industries rests on the provision that no establishment embraced within that classification can be opened or transferred from one locality to another without special authorization by the Government. The duties of the officials and agents connected with this service are to visit industrial establishments subject to the law; to inform themselves concerning all infractions of the law or regulations issued in relation thereto; to grant, when proper, the authorization prescribed in relation to the employment of children; to submit reports and recommendations concerning the application of the law; and also to give advice and furnish statistical and other

information which may be requested of them by the authorities and which they have collected in order to determine the effect of the labor legislation and to study the reforms that can be introduced therein. Other special duties devolving on the bureau of labor have been sufficiently indicated in the decree of April 12, 1895, which has been given.

The inquiries undertaken by the bureau regarding Sunday labor and statistics of strikes have been made by means of circular blanks, but in practically all of its remaining work recourse is generally had to the personal method of collection. It is stated by the director-general that in every case where it can be applied, the collection of statistics by special agents is greatly preferable to that by means of correspondence and circular blanks.

The following publications of the bureau have been issued as indicated:

REGULAR PUBLICATIONS.

The Labor Review. (*Revue du Travail.*) Monthly bulletin; first number was for January, 1896.

Yearbook of Labor Legislation. (*Annuaire de la Législation du Travail.*) Annual report; first report was for the year 1897.

Annual Reports of Labor Inspection. (*Rapports Annuels de l'Inspection du Travail.*) First report was for the year 1895.

Of the *Revue du Travail* an edition of 3,000 is issued, while of the other regular reports the edition is usually 1,000. In addition to the regular reports noted above a number of important special reports have been issued from time to time in editions of 1,000 each. They are as follows:

SPECIAL REPORTS.

Insurance against Invalidity and Old Age in Germany. (*L'Assurance contre l'Invalidité et la Vieillesse en Allemagne.*) 344 pages. 1895.

Sunday Labor in Belgium and Foreign Countries. (*Travail du Dimanche.*) Five volumes. 1896-1898.

Night Work of Women in Industrial Establishments in Foreign Countries. (*Travail de Nuit des Ouvrières de l'Industrie dans les Pays Étrangers.*) 271 pages. 1898.

Commission on Workingmen's Pensions; Reports and Proceedings. (*Commission des Pensions Ouvrières; Rapports et Procès-verbaux.*) Three volumes. 1900.

Wages in Industrial Establishments in Ghent, Vol. I; Cotton Industry. (*Les Salaires dans l'Industrie Gantoise, Tome I; Industrie Cotonnière.*) 823 pages. 1901.

Statistics of Wages in Coal Mines, October, 1896-May, 1900. (*Statistique des Salaires dans les Mines de Houille, Octobre, 1896-Mai, 1900.*) 104 pages. 1901.

General Census of Trades and Industries of Oct. 31, 1896. (*Recensement Général des Industries et des Métiers, 31 Octobre, 1896.*) Eighteen volumes. 1901.

Laws and Regulations Concerning the Labor of Women and Children, the Regulation of Classified Establishments and Stone Quarries, the Payment of Wages to Working People, Shop Regulations, the Labor Contract, and Inspection of Labor. (*Lois et Règlements Concernant le Travail des Femmes et des Enfants, la Police des Établissements Classés et des Carrières à Ciel Ouvert, le Payement des Salaires aux Ouvriers, les Règlements d'Atelier, le Contrat de Travail et l'Inspection du Travail.*) 300 pages. 1902.

Electric Motors in Domestic Industries. (*Les Moteurs Électriques dans les Industries à Domicile.*) 292 pages.. 1902.

Flax-Spinning Mills, a Study in Industrial Hygiene. (*Les Filatures de Lin, Étude d'Hygiène Professionnelle.*) 473 pages. 1902.

Domestic Industries in Belgium. (*Les Industries à Domicile en Belgique.*) Six volumes. 1899 to 1904.

Industrial Monographs. (*Monographies Industrielles.*) 175 pages. 1903.

Statistics of Strikes in Belgium, 1896-1900. (*Statistique des Grèves en Belgique, 1896-1900.*) 284 pages. 1903.

Among the principal reforms and laws which are stated to have been due to the intervention of the bureau of labor, or which have been put into execution at its instance, the following are cited:

The definite organization of labor inspection;

The law concerning the regulation of workshops;

The law in relation to trade unions;

The law concerning the safety and health of employees in industrial and commercial enterprises;

The law in relation to the labor contract;

The regulation and measurement of the labor of working people;

The law concerning old-age pensions;

The inspection of provident institutions (mutual aid societies, workmen's homes societies);

The organization of statistics of labor;

The development of councils of prudhommes and of councils of industry and labor.

Inasmuch as the decree organizing the bureau of labor provides that the office shall have charge of the administrative service relative to the execution of the laws and regulations respecting the councils of industry and labor, the superior council of labor, and the councils of prudhommes, it seems necessary to furnish a brief statement of the purposes and functions of these bodies and their method of operation.

COUNCILS OF PRUDHOMMES.—These bodies were established in Belgium as early as 1809 in pursuance of the French law of March 18, 1806. After the investigation of the organization and work of these councils by the labor commission of 1886, and as a result of its recommendations, all previous laws were repealed and the work of these bodies was placed upon a new basis by the law of July 31, 1889. Slight modifications of this law have since been made by the law of November 20, 1896, and by a royal decree of January 8, 1897.

It is provided that each council must be created by law and the boundaries of its jurisdiction are at the same time defined. In case, however, certain trades or industries in a particular locality or district are of sufficient importance to warrant it, special councils may be created for their benefit and operate within the same boundaries. These councils of prudhommes consist of at least six members, half of whom are elected by the employers and half by the employees.

Elaborate provisions are made in the organic law relative to the qualifications of electors and candidates, the nomination of candidates, and the manner of holding elections. The president and vice-president of each council are appointed by the King, one selection being made from each of two lists furnished by the group of members of the council representing respectively the employers and the employees. These need not be members of the council and they, as well as the members, serve for a term of three years.

The jurisdiction and powers of these councils are stated by the law as follows:

The councils of prudhommes shall have jurisdiction concerning disputes either between employees or between employers and their employees in any matter relating to work done, labor, or wages in the branches of industry for which the councils are created. Their territorial jurisdiction is fixed by the locality of the factory and in the case of home workers, by the place where the contract is made.

At least two regular meetings must be held each month and special meetings may be called by the president of the council whenever circumstances warrant such action. An equal number of employer and employee members must be present at each meeting, and should one class be in excess, a sufficient number of the class in excess must retire to establish the numerical equality of acting members. Matters in dispute may be referred to a council for conciliation by the parties interested, and this must be done by a written request for intervention. The parties to a case must appear before the council, as well as witnesses in case the parties themselves disagree as to the facts. Each case is tried, judgment rendered, costs assessed, appeals taken (to the civil courts), etc., in the manner usual in courts of law. A most important feature of these councils is a board of conciliation consisting of two members which is created by each body, before which all disputes must first be brought and whose duty it is to make every reasonable effort to conciliate the parties to the dispute and thus dispose of the matter at issue. Failing in this, the case is then brought before the council itself.

In addition to the above-mentioned functions, these councils are clothed with power to impose fines not exceeding 25 francs (\$4.83) for the purpose of suppressing acts of bad faith, grave neglect, or other acts calculated to disturb the order and discipline of workshops and factories. They may also be called upon by the King to serve as advisory boards and render their opinions concerning any questions relating to labor and industry that may be submitted to them.

The expenses of each council are paid by the communes within its jurisdiction and provision is also made for rooms for holding their meetings. The members of the council are allowed a per diem while in attendance upon meetings equal to the average value of a day's labor

in the province, while the salaries and allowances of the council's registrar and constables are determined by royal decree.

COUNCILS OF INDUSTRY AND LABOR.—The establishment of these bodies was authorized by the law of August 16, 1887, and their purpose is well defined by a former director-general of the Belgian bureau of labor as follows:

Each council of industry and labor is in reality a small industrial parliament which concerns itself with the common interests of employers and employees, according to a programme established beforehand by the Government. They are consultative bodies which at times act also as conciliation boards.

Their origin may be attributed to the action of the labor commission of 1886, in recommending the creation of a system of boards for the arbitration or conciliation of industrial disputes. In the passage of the bill through the Parliament, however, the proposed boards or councils were intrusted with additional duties of great importance, consisting mainly of consultations with reference to the mutual interests of employers and workingmen with a view of obviating controversies between them. The principal difference between these councils of industry and labor in their capacity of conciliation boards and the councils of prudhommes, whose most important duties are connected with the conciliation and arbitration of industrial disputes, lies in the fact that the councils of prudhommes consider only disputes arising from a violation of contracts or agreements, and their judgments must be based on such contracts or agreements, while the councils of labor and industry consider disputes on matters concerning which no contracts or agreements exist, with the object of bringing about a mutual understanding between employers and workmen and the formation of contracts or agreements based thereon. The decisions of the former are binding, while the recommendations of the latter are of an advisory character, and may be adopted or not at the will of the parties to the dispute.

The following is a statement of the provisions of the law creating these councils:

There shall be created in every locality in which its utility is demonstrated a council of industry and labor. This council shall have as its mission the consideration of the mutual interests of heads of industrial establishments and employees, in order to prevent and, if required, adjust disputes that may arise between these two classes. A council may divide itself into as many sections as there are distinct classes of industries in its district, care being taken to unite in each those persons most competent to judge concerning matters pertaining to the industry to which it relates.

Councils shall be created by royal decree, either upon the direct initiative of the King or upon the request of the communal council or of the employers and employees interested. The decree shall in each case fix the boundaries, the industries to which the council

relates, and the number and nature of the sections. Each section shall be composed of an equal number of employers and employees, and this number shall be fixed by the decree creating the council, but must not be less than six nor more than twelve.

The organic law does not provide more than general directions as to the method of electing the members of these councils, but elaborate regulations similar to those prescribed for the councils of prudhommes have been provided by royal decree. The term of office is three years, and its officers are chosen by each section from among its members. The first of the duties of these councils, as has been heretofore mentioned, has been clearly stated as follows:

When the circumstances seem to require it the governor of the province, the mayor of the commune, or the president shall, upon the request of the employers or employees, convoke the section relating to an industry in which a conflict seems imminent. This section shall use its efforts to terminate the difficulty. If an agreement can not be reached, a summary report of the proceedings must be published.

The methods to be adopted in conciliation are not prescribed, and, as previously stated, the decision of the council can not be enforced. The limit of their powers, in the event of failure to bring about an agreement between the parties, is reached when the proceedings and their decision are given to the public.

The second of their duties has been stated as follows:

The King may call together the council of any district in full assembly, in order that it may give its advice concerning such questions or proposals of general interest relative to industry or labor which he may consider it desirable to submit to it. The King may also assemble a number of sections belonging to the same or different localities. Such an assembly shall elect its own president and secretary.

As in the case of the councils of prudhommes, provision is made for a place of meeting for these councils and for the payment of their members while in attendance upon its meetings.

Owing to the failure of the local authorities to request the creation of these councils as provided by law, two years elapsed after the enactment of the law before action was taken in this direction. The Government itself then took the matter in hand and created 17 councils in various industries during December, 1889, and since that time other councils have been created.

The following statement relative to the practical work of these bodies has been made by Mr. W. F. Willoughby in one of the bulletins of the United States Bureau of Labor, from which are derived much of the data forming the basis of the brief description of both the councils of prudhommes and the councils of industry and labor.

The function of these councils (councils of industry and labor) as boards of conciliation or arbitration has been exercised to a limited

extent only. Their importance as consultative chambers regarding industrial and labor matters has, however, steadily increased. The councils have not only been frequently summoned to give their opinion concerning proposed legislation, but they are given important powers in respect to the execution of the law of December 22, 1889, concerning the employment of women and children; the law of July 2, 1899, concerning the protection of the health and lives of industrial employees; and the law of August 16, 1887, concerning the payment of wages of workmen. The effect of these provisions is that the workmen, through these councils, can exercise an important influence in determining the conditions under which they shall labor and in the framing of new legislation.

SUPERIOR COUNCIL OF LABOR.—In order to give the councils of industry and labor an operating center and to complete their organization, the royal decree of April 7, 1892, established under the ministry of agriculture, industry, and public works a permanent body designated as the Superior Council of Labor (*Conseil Supérieur du Travail*). This body has the duty of preparing the questions to be referred to the councils of industry and labor, and of presenting to the Government the recommendations of the latter bodies. Another function of the superior council is to examine the bills and prepare the resolutions which are to be voted on by the legislature. It also furnishes, by means of special investigations, information concerning labor questions. In a word, it occupies itself with all questions concerning the relations between employers and employees, and the improvements to be made in the condition of the laboring classes. This council is now under the direction of the ministry of industry and labor and its membership is composed in equal proportions of representatives of employers of labor, representatives of workmen, and persons specially conversant with economic, social, and labor questions. The members are named by royal decree on suggestion by the minister (16 for each of the three classes) and many of those of the first two classes are also members of councils of industry and labor. The officers of the superior council are a president, three vice-presidents, and a secretary. The members hold their office for four years and are entitled to mileage and compensation for attendance at meetings of the council. In the proceedings of the council a majority of all the members present is necessary to carry a motion, and no action can be taken unless at least one-half of its membership is in attendance.

CANADA.

As early as 1890 provision was made by the Parliament of Canada for the creation of a bureau of labor under the department of agriculture. The duties assigned to the chief of this office by the organic act were described as follows:

To collect, classify, and arrange, and present in quarterly bulletins and in yearly reports to Parliament, statistics relating to all kinds of labor in Canada, and such statistics may be classified in the manner set forth in the schedule to this act.

The intent of the above law, however, was never carried out, no information of the character described having been published.

Later on an investigation made during the years 1897 and 1898 by Mr. W. L. Mackenzie King at the request of the Hon. Sir William Mulock, postmaster-general, relative to the methods of carrying out the government clothing contracts, directed the attention of the Parliament to the prevalence of the sweating system, and more especially to its existence in the shops engaged on government work. The report on this subject excited a general discussion and resulted in the passage of a resolution in the House of Commons in March, 1900, to the effect that all government contracts should contain such conditions as would effectively prevent the abuses arising from the subletting of such contracts, and that every effort should be made to secure the payment of such wages as are generally accepted as current in each trade for competent workmen in the district where the work is carried out, and the working of a fair number of hours by persons engaged on such work. The work referred to in the resolution was to include not only work undertaken by the Government itself, but also all works aided by grant of Dominion funds. The discussion in the Parliament of other matters of interest to labor naturally followed, and this, together with the increasing necessity for important statistical information in regard to industrial conditions, and the keen personal interest of the Hon. Sir William Mulock in the welfare of the working classes, may be said to constitute the principal causes leading to the introduction into the House of Commons of the conciliation act of 1900, which made provision not only for the settlement of labor disputes by conciliation and arbitration, but also for the establishment of a department of labor and the publication of the Labor Gazette and the presentation to the Parliament of an annual report.

The act, under the authority of which the department of labor was established, received the royal assent on July 18, 1900, and the portion relating thereto, reads as follows:

With a view to the dissemination of accurate statistical and other information relating to the conditions of labor, the minister shall establish and have charge of a department of labor, which shall collect, digest, and publish in suitable form statistical and other information relating to the conditions of labor, shall institute and conduct inquiries into important industrial questions upon which adequate information may not at present be available, and issue at least once in every month a publication to be known as the Labor Gazette, which shall contain information regarding conditions of the labor market and

kindred subjects, and shall be distributed or procurable in accordance with terms and conditions in that behalf prescribed by the minister.

The expenses incurred in the carrying out of this act shall be defrayed out of the money provided for the purpose by Parliament.

An annual report with respect to the matters transacted by him under this act shall be made by the minister to the governor-general, and shall be laid before Parliament within the first fifteen days of each session thereof.

The work of organizing the new department was begun immediately after the passage of the act, and the first number of the Labor Gazette issued by September 15, 1900.

Under the minister of labor the department is in charge of a deputy minister of labor, who receives a salary of \$3,200. In addition to this officer, who is also editor of the Labor Gazette, the personnel of the office includes an associate editor of the Labor Gazette, a secretary to the deputy minister, a librarian, 2 fair-wages officers, 4 clerks, and a stenographer—a total of 11 officers and employees. The 10 employees of the department are paid salaries ranging from \$600 to \$1,550 per annum, the average compensation being \$1,165. All hold their positions on a civil-service basis, and with the exception of two have been employed in the department since its organization. In this connection it should be stated that the above regular force is augmented by a corps of local correspondents, about thirty in number, who cover most of the cities of the Dominion, and have been appointed to assist in the carrying out of the policy of the office as regards its principal publication, the Labor Gazette. It is the duty of these correspondents, who are compensated by small annual salaries, to make report monthly on the condition of the labor market in their respective cities and districts; to supply information in regard to particular trades, the more important industrial events, and other local information of interest to labor generally. It is also their duty to keep the department informed of the commencement and progress of industrial disputes which may arise within their jurisdiction; to furnish statistics and information in reference to economic conditions in their respective localities, as required by the department, and to discharge such other duties as may, from time to time, be committed to them.

The total expenditures of the department for the fiscal year ended June 30, 1902, as shown by the latest report available—the second annual—amounted to \$31,964. This amount includes salaries, the publication of the Labor Gazette, traveling expenses in connection with the work of the fair-wages officers, and the settlement of industrial disputes, and all other items.

In addition to the regular work of collecting and disseminating statistics of labor, the department of labor is charged with very important duties in connection with conciliation of labor disputes and the enforcement of the provisions of the resolution of the House of Com-

mons relative to fair wages. The deputy minister of labor has acted as conciliator in a large number of industrial disputes referred to the department under the act, and two fair-wages officers are engaged with the preparation of schedules of wages for insertion in Government contracts.

The conciliation act of July 18, 1900, under one section of which the department of labor was organized, provided also for the prevention and settlement of trade disputes by some form of voluntary conciliation. Under this act the minister of labor may intervene by making an inquiry upon his own motion, by appointing a conciliator on the application of either party, or by appointing an arbitrator on the application of both parties to the dispute. The administration of the act is thus seen to be directly under the department which has up to the present time proceeded only upon application of one or both of the parties for friendly intervention, deeming it inexpedient for the department itself to take the initiative. It is stated in the report of the department that in all cases where application has been made, a conciliator was immediately sent to interview the parties to the dispute and arrange a settlement where possible. In every case in which the conciliator has been sent by the Government, his authority has been recognized by employers and employees alike, and each party has expressed a willingness to avail itself of the good offices of the department to bring about an adjustment of the existing difficulties. This attitude has greatly facilitated the settlements which have been made. It is further stated in this connection that the power of the conciliator is not dependent upon the willingness of each of the parties to avail itself of his good offices, but that the strength of his position lies in the provision of the act that the conciliator must present to the minister of labor a report of his proceedings, which report, as contemplated, though not expressed in the act, is published in the *Labor Gazette*, the official journal of the department. The knowledge of each of the parties to a dispute that its case, in so far as the position can be learned by the conciliator, must appear in an official record of the Government, which serves for a focus of public opinion, greatly influences each party to submit a fair statement of its case at the outset, and to refrain from any delay in granting reasonable concessions or from holding out for unreasonable demands. The experience of the department in its settlement of disputes has been quite successful. Its report for the fiscal year which ended June 30, 1902, states that intervention was sought in 11 cases, in 6 of which a settlement was effected within two days after the arrival of the conciliator, while in 4 cases the aid of the department had been requested too late, the employers claiming that they were no longer embarrassed.

Reference has already been made to the resolution relating to fair wages on public contract work passed by the House of Commons on

wages and cost of living, etc., digests of labor laws, reports of current work of the department under the conciliation act and the fair-wages resolution, etc.

The most important results of the work of the department in the way of practical reforms are said to be those pertaining to the settlement of strikes and lockouts by conciliation and the enforcement of the fair-wages resolution of the House of Commons.

DENMARK.

A purely statistical bureau (*Bureau de Statistique de l'État*) was established in Denmark January 1, 1850, succeeding the "Tabelkommission," which had existed since 1833. Its present organization, however, was obtained by the law of December 16, 1895, under which the bureau was thoroughly reorganized and its functions materially enlarged. This reorganization, as well as the creation of the bureau, were due solely to the initiative of the Government. It should be stated that it is not devoted specially to the collection, compilation, and dissemination of statistics of labor, but is a central bureau of statistics, comprising in its work a wide range of subjects, which naturally include to some extent statistics relative to the social and economic condition of the working classes.

The scope of the work of the bureau is determined by the law of December 16, 1895. This law, so far as it provides for the collection and publication of statistics of labor, specifies the following subjects:

Social statistics, embracing conditions of living in the different social classes, such as reports on food materials, commodities consumed, workingmen's budgets, workingmen's insurance; statistics of wages and of earnings in the different trades; statistics of savings and of people's banks.

Aside from the purely statistical work the officials of the bureau are charged with no other public duties.

The personnel of the bureau consists of a director, two bureau chiefs, and four associates, appointed by the King, and ten assistants, appointed by the minister of finance. The director receives a salary of from 4,800 to 6,000 crowns (\$1,286.40 to \$1,608) per annum, according to the length of his service; the two chiefs of bureau 3,200 and 3,600 crowns (\$857.60 and \$964.80), respectively; while of the four associates two receive 2,400 crowns (\$643.20) each, one, 2,200 crowns (\$589.60), and one, 1,800 crowns (\$482.40). The ten assistants, three of whom are women, receive annual salaries ranging from 1,000 to 1,400 crowns (\$268 to \$375.20), the average being 1,220 crowns (\$326.96). While the director has been connected with the bureau but one year, his two principal assistants have served eleven years each, and the four associates from seven to thirty years. The average length of service of the ten assistants is over six years.

The expenses of the bureau for the year ending March 31, 1902, were 112,280 crowns (\$30,091.04), distributed as follows: Salaries of officials, 21,300 crowns (\$5,708.40); salaries of assistants, 13,200 crowns (\$3,537.60); pay for special work, 34,880 crowns, (\$9,347.84); office expenses and printing, 37,300 crowns (\$9,996.40); and rent, 5,600 crowns (\$1,500.80).

The powers of the bureau with regard to requiring statistical information are not fixed by any particular provisions of the law. In conformity with the communal laws (that of the rural communes of July 6, 1867, and that of city communes of May 26, 1868), the communal administrations are required to furnish information regarding the population, the number of cattle, and other communal statistics; but these laws do not prescribe the limits of the duties of the public with regard to giving information for statistical purposes. Nevertheless, the statistical material collected has for its principal basis the regulations of these two laws. In one case particularly, where an important statistical work is undertaken, a legal right has been established to this end, under the law of March 22, 1897, which requires a census of trades and industries. Under this right the duties of manufacturers are limited to the communication of information regarding the number of employees, the goods produced, etc. Furthermore, resort is also had to the factory law of April 11, 1901, which prescribes the information for statistical purposes that may be required of chiefs of establishments which come under the supervision of the factory inspectors. These latter are not, however, under the direction of the statistical bureau.

As a rule the information and statistics obtained by the bureau are in the form of written reports and schedules from the authorities or individuals. Sometimes, however, information is sought through personal investigation, when one of its officials is sent to ascertain on the spot certain facts of a local nature.

In addition to a statistical annual, the bureau publishes "*Statistik Tabelvaerk*," comprising statistical tables relating to population, judicial statistics, agricultural statistics, statistics of commerce and navigation, and financial statistics. That portion of its publications devoted to social and labor statistics appears under the collective title of "*Communications Statistiques*," ten or more being issued at irregular intervals during each year in editions of about 1,000 copies. The issue of the other publications of the bureau average about the same number.

FRANCE.

In France a bureau of labor (*Office du Travail*) was created by the law of July 20, 1891, which constituted it a branch of the ministry of commerce. Its organization and functions were determined by special regulations approved by the decree of the President of the Republic

dated August 19, 1891. These regulations make it the duty of the bureau "to collect, systematize, and publish all information relating to labor, particularly as regards the state and development of production, the organization and remuneration of labor, its relations with capital, the condition of the working people, and the comparative situation of labor in France and in foreign countries."

Its functions have not been changed since its establishment, but its organization has received slight modifications in consequence of larger modifications affecting the entire ministry of commerce.

By virtue of a decree of October 10, 1900, and a ministerial order of the same date, the bureau of labor has ceased to be a service independent of the administrative services of the ministry. To it has been annexed the inspection of labor, the service of the councils of prudhommes, and some other services of various degrees of importance. The whole has been grouped under the name of Department of Labor (*Direction du Travail*), forming one of the four departments among which are now divided the functions of the ministry of commerce, industry, posts, and telegraphs (*Ministère du Commerce, de l'Industrie, des Postes, et des Télégraphes*).

The department of labor comprises three bureaus, the functions of which are as follows:

Bureau No. 1.—Bureau of labor and general statistics (*Office du Travail et Statistique Générale*):

Superior council of labor; councils of labor; superior council of statistics; comparative legislation.

Bulletin of the bureau of labor.

Technical services; investigations, information, and statistics relating to labor; statistical annual; annual statistics of demography and public aid; enumeration of population, etc.

Bureau No. 2.—Inspection of labor (*Inspection du Travail*):

Regulation of labor in industrial plants, manufactories, shops, yards, warehouses, etc.; hygiene and safety of shops and other work places; inspection of labor; superior commission of industrial labor.

Consulting committee of arts and manufactures.

Dangerous or insanitary establishments.

Dynamite and other explosives.

Bureau No. 3.—Trades organizations and councils of prudhommes (*Associations Professionnelles et Conseils de Prud'hommes*):

Laws and regulations relating to labor inquiries and to labor contracts.

Councils of prudhommes.

Unemployment; institutions and regulations for the placing of workmen and salaried employees, for works of relief, for traveling assistance, and for indemnities for unemployment.

Strikes; conspiracies; conciliation and arbitration.

Industrial associations of employers, of workingmen, and of salaried employees; mixed associations; leagues or federations of associations; labor exchanges; examination of by-laws, etc.; donations of books, models, or collections to the libraries of industrial organizations; publication of the annual of trade associations.

Cooperative associations; distribution of subsidies to workingmen's productive and credit associations; profit sharing.

The functions of the bureau of labor as originally created are to-day divided between the first and the third bureaus of the department of labor as shown above. This division of work, while favoring the dispatch of business, does not in any degree impair the unity of the bureau of labor, the immediate direction of which is under the director of labor.

The department of labor being a part of the central administration of the ministry of commerce, its personnel is subject, not to special provisions of law, but to the organic regulations of the ministry. An applicant for a position, when accepted by the central administration, is placed in the service where a vacancy exists and, in the course of his career, may be transferred from one bureau to another, and even from one department to another department, according to his fitness or the requirements of the service. The director himself is appointed by the President of the Republic, while all other functionaries are appointed by the minister of commerce. The director receives from 15,000 to 18,000 francs per annum (\$2,895 to \$3,474); the three chiefs of bureaus, 7,000 to 9,000 francs (\$1,351 to \$1,737); the three assistant chiefs, 4,500 to 6,000 francs (\$868.50 to \$1,158); the nine editors and translators, 2,000 to 4,000 francs (\$386 to \$772); the nine copyist clerks, 1,800 to 4,000 francs (\$347.40 to \$772); and the five typewriters, 1,800 to 3,000 francs (\$347.40 to \$579).

The entire personnel of the department is thus seen to consist of 30 persons, of whom 13 are attached to the bureau of labor, 8 to the labor-inspection service, and 8 to the service devoted to trades organizations and councils of prudhommes. The total of the annual salaries of the 30 persons constituting the personnel of the labor department amounts to approximately 112,000 francs (\$21,616). It has been impossible to secure a statement of the other expenses connected with the administration of the labor department, such as heating, lighting, office expenses, etc., owing to the fact that this department is housed in the same building with the three other departments of the ministry of commerce, etc., and its supplies are paid for by a common appropriation. It could only be learned that the central administration (of which the labor department forms more than one-fourth) expends 72,400 francs (\$13,973.20) a year for compensation of attendants and 93,400 francs (\$18,026.20) a year for maintenance of equipment and office expenses of all kinds.

Besides the personnel of the central administration comprised in the three bureaus above described, the director of labor employs for investigations by the bureau of labor an outside force of special agents consisting of permanent investigators, the number of whom is fixed at two, and temporary investigators, the number of whom is variable, but at present is five. The work incident to the census of trades requires the employment of numerous aids; but the number of these employees, who are temporary and not attached to the administration, varies so that it is impracticable to take account of it in representing the normal footing of the labor department. The relations of the director with the investigators are immediate, he himself keeping in touch with their work.

The resources of the department of labor are not by any means limited to the sums previously mentioned. There are in the budget of the ministry of commerce seven appropriations at the disposal of the director of labor. These are as follows, given in the order of the bureaus to which they belong:

BUREAU No. 1.—Bureau of labor and general statistics.

1. Appropriation entitled "Bureau of labor and general statistics," under which there was entered for the year 1902 a credit of 95,000 francs (\$18,335), distributed as follows:

Services of permanent investigators or special agents.....	\$2,702.00
Special services rendered by temporary investigators.....	772.00
Services of temporary investigators:	
Bureau of labor.....	4,342.50
Statistics.....	96.50
Purchase of books and subscriptions to reviews and journals:	
Bureau of labor.....	289.50
Statistics.....	96.50
Printing:	
Bureau of labor.....	5,790.00
Statistics.....	4,246.00

2. Appropriation entitled "Superior council of labor," under which there was entered for the year 1902 a credit of 23,000 francs (\$4,439), distributed as follows:

Compensation of clerks and reporters.....	\$579
Attendance checks and reimbursement of members of the council.....	1,351
Printing, publications, stenography, and miscellaneous expenses.....	2,509

3. Appropriation entitled "Quinquennial census of trades." The expense incident to the census of trades taken in 1901 was estimated at 1,000,000 francs (\$193,000). This sum was distributed over five years. The proportional part, 200,000 francs (\$38,600), assigned to the budget of 1902, is divided thus:

Personnel.....	\$24,125
Supplies.....	14,475

BUREAU No. 2.—*Inspection of labor.*

4. Appropriation entitled "Inspection of labor," under which there was entered for the year 1902 a credit of 737,500 francs (\$142,337.50), distributed as follows:

Salaries of inspectors.....	\$94,763.00
Compensation of secretary of superior commission.....	193.00
Office and traveling expenses.....	38,214.00
Editing and publishing the Bulletin of Labor Inspection and reports on the application of the laws regulating labor.....	2,412.50
Compensation and reimbursement for service at mines.....	6,755.00

5. Appropriation entitled "Consulting committee on arts and manufactures," under which there was entered for the year 1902 a credit of 27,000 francs (\$5,211), distributed as follows:

Salary of the secretary of the committee.....	\$926.40
Attendance checks for members of same.....	4,246.00
Miscellaneous expenses of the committee.....	38.60

BUREAU No. 3.—*Trades organizations and councils of prudhommes.*

6. Appropriation entitled "Encouragement to workingmen's productive or credit associations," under which there was entered for the year 1902 a credit of 148,000 francs (\$28,564) for subsidies to the associations referred to.

7. Appropriation entitled "Encouragements and medals for trade associations and councils of prudhommes," under which there was entered for the year 1902 a credit of 18,500 francs (\$3,570.50), distributed as follows:

Encouragements to trades associations, purchase and remittance of books, medals, etc.....	\$2,895.00
Annuary of trades associations.....	579.00
Medals of honor for members of councils of prudhommes.....	96.50

From the foregoing may be obtained a correct idea of the functions of the department of labor. Placed under the immediate authority of the minister of commerce, it is not endowed by law with special powers, but as an agency of the minister it possesses all the powers which the laws, given in the constitution, or otherwise, confer upon him as a member of the Government.

The bureau of labor gathers its information by three methods: By personal inquiries; through certain administrative officers, such as prefects, under-prefects, and mayors, and by schedules of inquiry addressed to competent persons or bodies. The choice of the method to be employed depends on the purpose of the investigation.

The following publications of the bureau of labor and general statistics have been issued as indicated:

REGULAR PUBLICATIONS.

Bulletin of the Bureau of Labor. (*Bulletin de l'Office du Travail.*) Monthly bulletin; first number was for January, 1894. Three thousand copies are printed each month.

Statistics of Strikes, and of Recourse to Conciliation and Arbitration. (*Statistique des Grèves et des Recours à la Conciliation et à l'Arbitrage.*) Annual report; first report was for the year 1890.

Statistical Annual. (*Annuaire statistique.*) First report was for the year 1892. The statistical annuals for the years 1878 to 1891 were published by the general statistical office of the ministry of commerce, industry, and the colonies.

Annual Statistics of Demography and Public Aid. (*Statistique générale de la France—Statistique annuelle—Démographie et Assistance.*) First report was for the year 1890. The annual reports for the years 1871 to 1889 were published by the division of accounts and statistics of the ministry of commerce, industry, and the colonies.

SPECIAL REPORTS.

The Placing of Salaried Employees, Workingmen, and Domestic in France, with an Appendix on Placing in Foreign Countries. (*Le Placement des Employés, Ouvriers, et Domestiques en France, avec un Appendice relatif au Placement dans les Pays Étrangers.*) 742 pages. 1893. (A report on the work of employment offices.)

Second Inquiry on the Placing of Salaried Employees, Workingmen, and Domestic. (*Seconde Enquête sur le Placement des Employés, des Ouvriers et des Domestiques.*) 186 pages. 1901.

Conciliation and Arbitration in Collective Disputes between Employers and Workingmen in France and in Foreign Countries. (*De la Conciliation et de l'Arbitrage dans les Conflits collectifs entre Patrons et Ouvriers en France et à l'Étranger.*) 616 pages. 1893.

Review of the Sixth Annual Report of the U. S. Department of Labor (*Examen du 6ème Rapport Annuel du Département du Travail des États-Unis*) and The Artels and Dividend Sharing by Employees of the Russian Railways (*Des Artèles et de la Participation Intéressée du Personnel dans les Chemins de Fer Russes*). 93 pages. 1893.

Wages and Hours of Labor in French Industry. (*Salaires et Durée du Travail dans l'Industrie Française.*) 4 volumes. 1893 to 1897.

Wages Data for Various Classes of Workingmen in 1900 and 1901. (*Bordereaux de Salaires pour Diverses Catégories d'Ouvriers en 1900 et 1901.*) 232 pages. 1902.

Minimum Wages in Public Works. (*Minimum de Salaire dans les Travaux Publics.*) 129 pages. 1897.

Small Industries: Wages and Hours of Labor. (*La Petite Industrie: Salaires et Durée du Travail.*) Two volumes. 1893 and 1896.

Workingmen's Cooperative Productive Associations in France. (*Les Associations Ouvrières de Production en France.*) 613 pages. 1897.

Hygiene and Safety of Workers. (*Hygiène et Sécurité des Travailleurs.*) 660 pages. 1895.

Documents on the Question of Unemployment. (*Documents sur la Question du Chômage.*) 398 pages. 1896.

Relief in Cases of Unemployment in 1896-1898. (*Travaux de Secours en cas de Chômage en 1896-1898.*) 23 pages. 1899.

Documents Relating to Piecework. (*Documents sur le Marchandage.*) 125 pages. 1899.

Inquiry into the Legislation Respecting Councils of Prudhommes. (*Enquête sur la Législation des Conseils de Prud'hommes.*) 55 pages. 1900.

Compulsory Insurance against Labor Accidents in Germany and Austria. (*L'Assurance Obligatoire contre les Accidents du Travail en Allemagne et en Autriche.*) Two volumes, 110 and 124 pages. 1892.

Statistical Results of Compulsory Insurance against Sickness in Germany and Austria. (*Résultats Statistiques de l'Assurance Obligatoire contre la Maladie en Allemagne et en Autriche.*) Two volumes, 134 and 147 pages. 1893.

A Study of the Latest Results of Social Insurance in Germany and Austria. (*Étude sur les Derniers Résultats des Assurances Sociales en Allemagne et en Autriche.*) Two volumes, 180 and 229 pages. 1894 and 1895.

Industrial Employers' Pension Funds. (*Les Caisses Patronales de Retraites [industrie].*) 437 pages. 1898.

Statistical Bases of Accident Insurance. (*Bases Statistiques de l'Assurance contre les Accidents.*) 235 pages. 1899.

Labor Organizations. (*Les Associations Professionnelles Ouvrières.*) Three volumes, 905, 895, and 679 pages. 1899, 1901, and 1902.

Attachment of Wages. (*Saisie-arrêt sur les Salaires.*) 138 pages. 1899.

Social and Labor Legislation in Australia and New Zealand. (*Législation Ouvrière et Sociale en Australie et Nouvelle-Zélande.*) 200 pages. 1901.

Industrial Poisons. (*Poisons Industriels.*) 449 pages. 1901.

Report on Apprenticeship in the Printing Trades, 1899-1901. (*Rapport sur l'Apprentissage dans l'Imprimerie, 1899-1901.*) 416 pages. 1902.

Statistical Results of the Enumeration of the Population in 1891. (*Résultats Statistiques du Dénombrement de la Population en 1891.*) Two volumes, 349 and 814 pages. 1893 and 1894.

Statistical Results of the Enumeration of 1896. (*Résultats Statistiques du Dénombrement de 1896.*) 491 pages. 1899.

Statistical Results of the Census of Industries and Trades in 1896. (*Résultats Statistiques du Recensement des Industries et Professions en 1896.*) Four volumes, 845, 803, 663, and 440 pages. 1899-1901.

Distribution of Applied Steam and Water Power in 1899. (*Répartition des Forces Motrices à Vapeur et Hydrauliques en 1899.*) Two volumes, 235 and 224 pages. 1900 and 1901.

Mention should be made of the volumes and the reports which are presented to the superior council of labor at each of its sessions, with the view of illustrating as much as possible by actual cases the questions entered on its calendar. The proceedings of the superior council are likewise published after each session. The first session report was for the year 1891.

The publications of bureau No. 2 of the department of labor, engaged in the service of inspection, need particular mention as furnishing an account of the work of that service. These are: The Annual Report on the Administration of the Laws Regulating Labor (*Rapport sur l'Application des Lois Réglementant le Travail*), the first report of which was for the year 1893, and the Bulletin of the Inspection of Labor (*Bulletin de l'Inspection du Travail*), published bimonthly since 1893. The latter contains all the jurisprudence as well as articles on hygiene and safety in industry.

Bureau No. 3, trades organizations and councils of prudhommes, publishes an Annual of Trade Associations (*Annuaire des Syndicats Professionnels*), the first of which was for the year 1897.

The expenses of printing the publications of the department of labor have already been indicated in connection with the statement of the appropriations of the office, but it may be interesting to show these expenditures separately: To the account of the superior council of labor are charged all costs of printing due to the operations of this council, these being estimated at 13,000 francs (\$2,509). To the account of the quinquennial census of trades will be charged the costs for the printing of this census, but as the printing has not yet been commenced there was no expense to provide for on the 1902 budget previously mentioned. To the account of the encouragements and medals for trades associations, etc., are charged the costs of printing the Annual of Trade Associations, the estimate of cost being 3,000 francs (\$579). To the account of the bureau of labor and general statistics are charged all the other printing expenses occasioned by publications of the bureau of labor, estimated for 1902 at 52,000 francs (\$10,036), of which 30,000 (\$5,790) was for the bureau of labor and 22,000 (\$4,246) for general statistics. Thus the estimate for the total expenditures on account of printing for the bureau of labor and for general statistics amounts, for 1902, to 68,000 francs (\$13,124). If to that sum is added the expenses of the Bulletin of Labor Inspection and of the Annual Report on the Administration of the Laws Regulating Labor, which amount to 12,500 francs (\$2,412.50), the total of the credits placed at the disposal of the department of labor to insure the printing of its documents foots up to 80,500 francs (\$15,536.50). It should be noted, however, that the above is only an estimate, for, while transfers from one account to another are absolutely prohibited, transfers from one article to another, under one and the same account, are not forbidden.

Through its operations, which began over ten years ago, the bureau of labor has contributed greatly to the progress effected within this period in labor legislation. The director of the bureau, however, does not wish it to appear that his office claims exclusive credit for such reforms, inasmuch as they could not have been undertaken without the support of public opinion and the cooperation of the Government and of the legislative power.

With this reservation, the following is the list of the legislative enactments promulgated since 1892 relating to questions of interest to labor which have been effected largely through the influence of the bureau of labor and its reports:

Law of December 2, 1892, on the labor of children, of girls in mines, and of women in industry.

Law of December 27, 1892, on conciliation and arbitration.

Law of June 12, 1893, on hygiene and safety of workers.

Law of July 15, 1893, on free medical attendance.

Law of July 29, 1893, for admitting workmen's associations to compete for communal works and supplies.

Law of August 8, 1893, for the protection of national labor.

Law of June 29, 1894, on relief and pension funds of mine workers.

Law of November 5, 1894, on the formation of farmers' loan associations.

Law of November 30, 1894, on cheap housing.

Law of December 19, 1894, on relief and pension funds of mine workers.

Law of January 12, 1895, on attachment of wages and low salaries of workmen and employees.

Law of February 8, 1895, amending article 549 of the commercial code (as to wages).

Law of July 20, 1895, reorganizing the savings banks system.

Law of December 27, 1895, as to pension, relief, and provident funds for salaried employees and workmen.

Law of December 29, 1895, as to the inheritance of the pensions coming from the national pension fund.

Law of March 31, 1896, on cheap housing.

Law of July 16, 1896, on relief and pension funds of mine workers.

Law of July 17, 1897, authorizing the insurance fund to make the sum payable in the event of death divisible among several beneficiaries (literally to make mixed insurances in the event of death).

Law of April 1, 1898, on mutual relief associations.

Law of April 9, 1898, concerning responsibility for accidents to employees in their work.

Law of April 19, 1898, for the repression of disorder, acts of violence, acts of cruelty, and assaults on children.

Law of April 21, 1898, for the creation of a provident fund on the part of French seamen against the risks and accidents of their occupation.

Law of March 31, 1899, for the establishment and subsidizing of district mutual agricultural credit funds and local mutual agricultural associations and banks.

Law of May 24, 1899, extending, with a view to the application of the law of April 9, 1898, the operations of the national fund for accident insurance.

Law of June 30, 1899, concerning accidents caused in agricultural work by the use of machinery operated with mechanical power.

Decree of August 10, 1899, as to conditions of labor on contracts let on behalf of the State.

Decree of August 10, 1899, as to conditions of labor on contracts let on behalf of departments.

Decree of August 10, 1899, as to conditions of labor on contracts let by communes and public charity institutions.

Law of March 30, 1900, amending the law of November 2, 1892, on the labor of children, of girls in mines, and women in industrial establishments.

Law of July 4, 1900, relating to the constitution of associations or funds for farmers' mutual insurance.

Decree of September 17, 1900, for the establishment and organization of councils of labor.

Law of December 25, 1900, amending the law of March 31, 1899, for the establishment and subsidizing of district mutual agricultural loan funds.

Law of December 29, 1900, fixing the conditions of the labor of women employed in stores, shops, and places connected therewith.

Decree of January 2, 1901, concerning councils of labor.

Law of March 25, 1901, amending the law of July 8, 1890, concerning delegates to look after the safety of mine workers.

Law of July 18, 1901, guaranteeing their work and employment to reservists called to serve their term of military instruction.

Law of July 20, 1901, amending article 6 of the law of November 5, 1894, concerning the formation of farmers' loan associations.

Law of March 22, 1902, amending various articles of the law of April 9, 1898, concerning responsibility for accidents to employees in their work.

Law of April 10, 1902, supplemental to the law of December 27, 1890 (contract of lease).

The important work of the department of labor of France so far as it relates to the collection and publication of statistics of labor and the enactment of remedial legislation has been fully shown. Its supervision of the service for the inspection of factories and of the various bodies whose duties consist largely in the conciliation and arbitration of labor disputes has been given but passing notice. The important duties of the department in this connection should not be overlooked. A most complete system of factory inspection has been established and is being enforced, and the work of the councils of prudhommes and other arbitration tribunals has shown highly beneficial results. The details in connection with both these classes of service have been explained in Bulletin No. 25 of the United States Bureau of Labor and need not occupy space here. An account of the councils of prudhommes and other bodies formed for bringing about the adjustment of labor disputes has been given in connection with the description of the work and functions of the bureau of labor of Belgium in the preceding pages. These bodies operate under practically the same conditions and have practically the same functions in France as in Belgium, and the reader is therefore referred for information to the description previously given.

GERMANY.

As early as 1872 efforts were made toward the creation of a permanent Government bureau in Germany for the collection and dissemination of statistics and information relative to labor. It was not until 1891, however, that the central Government created a commission of labor statistics (*Kommission für Arbeiterstatistik*) for this purpose. While no official bureau or body specially concerned with the collection of labor statistics, etc., was in existence previous to the creation of this commission, a special bureau of statistics (*Kaiserliches Statistisches Amt*) for many years had been engaged to some extent in that class of work which bureaus of labor usually undertake. This condition was due to the fact that in Germany the central statistical offices of the Empire as well as those of the individual States were not confined to the usual statistical investigations, but were concerned as well with the multifarious topics which interest labor. As a consequence, even without special provision, there were prosecuted inter-

esting investigations within the field of labor statistics. The annual reports of the factory-inspection service in Germany furnished a contribution to the statistics of labor, presenting a great mass of information relative to the social and economic conditions of the workers in factories and workshops. The reports of the imperial statistical bureau on the effects of the laws relative to workingmen's insurance and of the imperial bureau of insurance relative to accidents to labor furnished another contribution to the available statistics of labor.

The commission of labor statistics was organized and began its work on April 1, 1892. It consisted of a president, appointed by the Imperial chancellor, and fourteen members—six chosen by the federal council (*Bundesrath*), seven by the Imperial Parliament (*Reichstag*), and one selected by the Imperial chancellor from the officials of the Imperial statistical bureau. The duties of this commission were to consider and advise concerning proposed statistical inquiries and their execution and results when requested by the Bundesrath or chancellor, and to submit to the chancellor plans for the prosecution of such inquiries. When necessary for ascertaining more clearly the conditions of the working classes, the commission had power to invite to its sessions for consultation equal numbers of employers and workingmen, and to interrogate any persons in a position to give needful information. All information gathered by the commission was compiled and prepared for publication by the Imperial statistical bureau. The commission during its existence issued 11 volumes of reports giving the results of its investigations. These relate to a variety of subjects, and have formed the basis upon which the Bundesrath has formulated regulations governing labor in a number of industries. Of these reports there are two relating to hours of labor in bakeries and confectioneries (*Erhebung über die Arbeitszeit in Bäckereien und Konditoreien*), issued in 1892 and 1893; three relating to hours of labor, notice of discontinuance of employment, and conditions of apprenticeship in the commercial industries (*Erhebung über Arbeitszeit, Kündigungsfristen und Lehrlings-Verhältnisse im Handelsgewerbe*), issued in 1893 and 1894; two relating to hours of labor in flour mills (*Erhebung über die Arbeitszeit in Getreidemühlen*), issued in 1894 and 1895; two relating to conditions of employment and compensation of waiters and waitresses (*Erhebung über die Arbeits- und Gehalts-Verhältnisse der Kellner und Kellnerinnen*), issued in 1894 and 1895; one relating to the conditions of labor in the garment-making industries (*Zusammenstellung der Ergebnisse der Ermittlungen über die Arbeitsverhältnisse in der Kleider- und Wäsche-Konfektion*), issued in 1896; and one relating to the hours of labor of clerks and apprentices in business offices and commercial establishments not connected with public sales-rooms (*Erhebung über die Arbeitszeit der Gehülfen und Lehrlinge in solchen Komptoren des Handelsgewerbes und kaufmännischen Betrieben*,

die nicht mit offenen Verkaufsstellen verbunden sind), issued in 1902. The last-mentioned report was prepared for publication by the division of labor statistics.

Owing to the inability of the commission of labor statistics to undertake the regular and systematic collection of statistics of labor, its services were replaced by a division of labor statistics (*Abtheilung für Arbeiterstatistik*), which was organized as a branch of the Imperial statistical bureau on April 1, 1902. An account of the organization of this division, as well as the provisions regarding the subcommittee for labor statistics and its business organization, was published in No. 1 of the Imperial Labor Bulletin (*Reichs-Arbeitsblatt*), April, 1903. From it has been taken the following information:

Considerable has already been done by the German Imperial and State governments in the field of statistical investigation concerning labor. Among the official statistics at hand bearing upon economic and social conditions are the population, occupation, and industrial censuses; a number of special investigations, such as those relating to apprentices, journeymen, and factory workers (1876), woman and child labor in factories (1877), Sunday labor (1885), wage conditions in the linen and underwear manufacturing industries (1887), the handicrafts (1896); the investigations of the commission of labor statistics regarding the bakers' and confectioners' trade, labor in flour mills, employees in mercantile establishments, hotel, restaurant, and saloon employees, persons employed in inland navigation, etc.; statistics collected on account of the sick, accident, invalidity, and old-age insurance system; and the annual reports of the factory inspectors. Social statistics have also been collected by the larger cities, chambers of commerce, and other public corporations. Many private institutions have conducted investigations in this field, as, for instance, the Social Economy Society (*Verein für Sozialpolitik*), employers' and employees' trade organizations, etc.

The duties of the division of labor statistics have been prescribed as follows:

1. The collection, compilation, and periodical publication of labor statistics and other information concerning labor conditions.

2. The conduct of special investigations by means of correspondence and personal inquiry; also the giving of advice.

The division for labor statistics is assisted by an advisory council. This council assumes, in a large measure, the duties of the late commission for labor statistics. Its duties are to assist the Imperial statistical bureau in carrying out its work in the sphere of labor statistics.

Its special functions are:

1. To give advice, whenever directed by the federal council or the Imperial chancellor (ministry of the interior), with regard to taking up, carrying on, and compiling statistical investigations.

2. To consult experts, whenever necessary, in the preparation of statistical material.

3. To make suggestions to the Imperial chancellor (ministry of the interior) for undertaking and carrying out statistical investigations.

The council consists of a president and 14 members, 7 of whom are elected by the federal council (*Bundesrath*) and 7 by the Imperial diet (*Reichstag*). The director of the Imperial statistical bureau is ex officio president of the council and has a vote in its proceedings. The members hold office during the legislative period and until their successors are elected.

When directed by the Imperial chancellor or requested by six members, the advisory council is authorized to invite an equal number of employers and employees to participate as associates. These have a consultative voice in the meetings.

The council may delegate some of its work to special or standing committees of its members, but the final adoption of the plan for carrying out a proposed statistical investigation and the giving of advice regarding such investigations can not be delegated to a committee.

The president calls the meetings of the council and of the committees. Any business which is not of special importance may be placed before one of the committees directly by the president, unless a majority of the committee or at least six members of the council request its consideration by the latter, in which case it must come before the council. The president presides over the committee meetings. The clerical work of the board is performed by the Imperial statistical bureau.

The Imperial chancellor (ministry of the interior) as well as the State governments have a right to send delegates to the meetings of the council, who must always be given a hearing. The Imperial chancellor (ministry of the interior) and the State governments must be informed, at least one week in advance, of the meetings to be held and of the regular business to be transacted. Officials of the Imperial statistical bureau may also be attached to the council and have a consultative voice in the meetings.

The Imperial chancellor fixes the rate of per diem or compensation to be paid and the traveling expenses allowed the members and others who are called to the meetings of the council.

The personnel of the division of labor statistics consists of 28 officials and clerks. A monthly labor bulletin (*Reichs-Arbeitsblatt*) is published, of which the first number was for April, 1903, and 12,000 copies of each issue are distributed. Although the division was not organized until April 1, 1902, investigations have been undertaken and completed relative to the hours of labor in offices and hours of labor in certain trades. It issues, at irregular intervals:

Publications of the advisory council for labor statistics: Reports of proceedings. (*Drucksachen des Beirats für Arbeiterstatistik: Verhandlungen.*)

Publications of the Imperial statistical bureau, division of labor statistics: Investigations. (*Drucksachen des Kaiserlichen Statistischen Amtes, Abteilung für Arbeiterstatistik: Erhebungen.*)

Its creation, however, is too recent to permit of any judgment as to the general effects and results of its work and investigations.

GREAT BRITAIN.

A resolution of the House of Commons in March, 1886, constituted the first definite action looking to the creation of an office in Great Britain for the collection of statistics of labor. The resolution read as follows: "In the opinion of this House, immediate steps should be taken to insure in this country the full and accurate collection and publication of labor statistics." In compliance with the suggestion contained in this resolution, a special service was organized for the collection and publication of statistics relating to the various subjects of interest to the laboring classes, under the direction of the commercial department of the board of trade. A special officer, with the title of labor correspondent, was appointed to have direct charge of the work.

In 1893 this service was greatly enlarged and a separate department under the board of trade organized to carry on the work. This new office, termed the Labor Department of the Board of Trade, forms one of three departments of the board of trade—the commercial department, the labor department, and the statistical department—all of which are carried on under the direction of a comptroller-general.

The following account of the present organization and work of the department of labor is taken from a memorandum issued by that office in August, 1903:

The labor department is under the direction of a commissioner for labor. The staff numbers 43. In addition to clerks of various grades, it consists of an assistant commissioner for labor, a chief labor correspondent, two senior investigators, and four investigators, one of them a lady, together with an assistant lady investigator.

In addition, there are a number of correspondents who are not on the staff of the department, but are paid by fees, and whose functions generally consist in furnishing monthly reports on the state of employment and in obtaining such information as may be required from time to time. These include four trade correspondents, 30 local correspondents, and four correspondents connected with organizations of work people, who report on certain trades only. The four trade correspondents are connected with associations of employers and supply reports dealing with the whole of their respective trades. The trades thus reported on are the building, the cotton, the woolen and worsted, and the boot and shoe trades. The 30 local correspondents in different parts of the United Kingdom obtain information chiefly from work people or their organizations and furnish reports dealing with the various industries in their respective districts. Most of the paid local correspondents are connected with trade unions; some are workmen engaged in various industries.

The principal work of the department may be grouped as follows:

I. To collect and publish statistics and general information on subjects relating to labor in the United Kingdom. Certain reports had been issued by the board of trade previous to the creation of the labor

department; others have been begun and continued by the labor department itself. The following is a list of those now issued:

Abstract of Labor Statistics. Annual; first report was for 1893-94.

Report on Changes in Wages and Hours of Labor. Annual; first report was for the year 1893.

Report on Strikes and Lockouts. Annual; first report was for the year 1888.

Proceedings of the Board of Trade under the Conciliation Act. Biennial; first report was for the period August, 1896, to June, 1897.

Report on Trade Unions. Annual; first report was for the year 1886.

Directory of Industrial Associations. Biennial; first edition was for the year 1899.

Abstract of Foreign Labor Statistics. Biennial; first report was for the years 1898-1899.

II. To make special inquiries into various important industrial questions. The following volumes, embodying the result of these inquiries, have been published:

Report on the Agencies and Methods for Dealing with the Unemployed. 440 pages. 1893.

Report on Alien Immigration into the United States. 392 pages. 1894.

Report on the Volume and Effects of Recent Immigration from Eastern Europe into the United Kingdom. 224 pages. 1894.

Report on Profit-sharing. 206 pages. 1894.

Report on Gain-sharing and Certain Other Systems of Bonus on Production. 132 pages. 1895.

Report on Standard Piece Rates of Wages and Sliding Scales in the United Kingdom. First report for the year 1893, 250 pages, 1894. Second report for the year 1900, 333 pages, 1900.

Report on Standard Time Rates of Wages in the United Kingdom. First report for the year 1893, 290 pages, 1894. Second report for the year 1900, 222 pages, 1900.

Report on Contracts given out by Public Authorities to Associations of Workmen. 352 pages. 1897.

Statistics of Employment of Women and Girls. 160 pages. 1894.

Changes in Employment of Women and Girls in Industrial Centers. Part I.—Flax and Jute Centers. 317 pages. 1898.

Report on Money Wages of Indoor Domestic Servants. 58 pages. 1899.

Provision for Old Age Abroad by Government Action in Certain European Countries. 60 pages. 1899.

Return of Employment of Children on leaving School (Upper Standards). 110 pages. 1899.

Report on Wholesale and Retail Prices in the United Kingdom in 1902, with comparative statistical tables for a series of years. 510 pages. 1903.

In addition to the above, a series of Reports on Wages in various industries in 1886 and 1891, a Report on Cost of Production, and other special reports on labor matters were published by the board of trade between 1886 and 1893.

III. To publish monthly a journal called the Labor Gazette.

The Labor Gazette, the first issue of which was for May, 1893, deals with a variety of subjects affecting labor questions, and furnishes statistical and other information collected by the department during the month from sources in the United Kingdom and abroad.

The state of employment in the principal trades of the United Kingdom is reported on, and, in addition to articles on special matters of interest, information with regard to the following subjects is usually given, namely: Trade disputes, conciliation and arbitration cases, changes in the rates of wages and hours, industrial accidents, industrial prosecutions, pauperism, industrial organizations, labor bureaus, friendly societies, legal cases affecting labor, and emigration and immigration. The Labor Gazette is sold at a moderate price, 1 penny, and many copies are distributed gratis to free libraries, workmen's associations, mechanics' institutes, chambers of commerce, etc.

Some account may here be given of the sources of the material from which the Labor Gazette is compiled, much of the information being also utilized in the annual publications of the department. In addition to reports and returns of an official nature received from other Government departments, and from H. M. consuls abroad (through the Foreign Office), a large number of returns are voluntarily furnished from unofficial sources.

The bulk of the unofficial returns relate to the state of employment. A number of returns are received direct from employers' associations and from trade unions. In certain industries returns are supplied direct to the department by individual employers and companies. The returns thus received deal with coal and iron mining, the pig-iron industry, iron and steel works, and tinplate works. In the case of four other industries, viz, the building, cotton, woolen and worsted, and boot and shoe trades, returns are supplied by employers and their associations to the trade correspondents, who furnish the department with reports and statistics based thereon. Information with regard to agricultural labor is received from correspondents in various parts of the country, most of whom are farmers or chairmen of rural district councils. In addition, the paid local correspondents furnish reports and statistics relating to the various industries carried on in their respective districts.

The system of obtaining information as to the state of employment through these local correspondents is found to be advantageous to the work of the department, as a large number of trade unions in the United Kingdom keep accurate records of their unemployed members for the purpose of unemployed benefit, and these records form one of the best tests of the state of the labor market. It is found that much of this information is most advantageously collected locally, and the local correspondents are paid fees to remunerate them for such collection. They are not employed to report on controversial matters, e. g., strikes.

As regards strikes and lockouts and changes in wages and hours of labor, it is the practice of the department, on learning of their occurrence, to dispatch forms of inquiry to the representatives of the employers and work people concerned, who in most cases readily supply the information for which they are asked.

IV. In addition to the work already described, the department has to administer the conciliation (trade disputes) act of 1896, which authorizes the board of trade to take action for the settlement of trade disputes under the following circumstances:

Where a difference exists or is apprehended between an employer or any class of employers and workmen, or between different classes

of workmen, the board of trade may, if they think fit, exercise all or any of the following powers, namely:

(a) Inquire into the causes and circumstances of the difference.

(b) Take such steps as to the board may seem expedient for the purpose of enabling the parties to the difference to meet together, by themselves or their representatives, under the presidency of a chairman mutually agreed upon or nominated by the board of trade or by some other person or body, with a view to the amicable settlement of the difference.

(c) On the application of employers or workmen interested, and after taking into consideration the existence and adequacy of means available for conciliation in the district or trade and the circumstances of the case, appoint a person or persons to act as conciliator or as a board of conciliation.

(d) On the application of both parties to the difference, appoint an arbitrator.

The board of trade also registers conciliation boards on their application, and may take action for the promotion of the formation of voluntary boards.

It is to be regretted that no figures are obtainable as to the expenses of the department of labor, owing to the fact that the data for this department are inseparably combined with those for the other departments of the board of trade.

ITALY.

One of the most recent bureaus of labor to be established in Europe is that of Italy, which was created by the law of June 29, 1902. By that law provision was made for the organization of a central bureau of labor (*Ufficio del Lavoro*) under the ministry of agriculture, industry, and commerce (*Ministero di Agricoltura, Industria e Commercio*), its special position being under the division of industry and commerce. The organization of the office was sanctioned by the royal decree of November 13, 1902, and the regulations for its operation were approved by the royal decree of January 29, 1903. The bureau began its operations on July 16, 1903.

In the Chamber of Deputies, session of June 8, 1901, Signor Zanardelli, president of the council and minister ad interim of agriculture, industry, and commerce, in presenting a draft of a law to establish a central bureau of labor and a superior council of labor and urging its passage, said in part:

These institutions, of a class already operating with beneficial results in many foreign lands, are needed also in our country, where, in consequence of the notable development resulting from agricultural and industrial production, questions relating to labor and laborers have acquired much importance. It is therefore a duty of the Government to give the most careful attention to the study of these questions, to devise the best means for securing the general improvement of these

ART. 6. To such members of the council and of the permanent committee as do not reside at Rome there shall be allowed a compensation for traveling and hotel expenses, at a rate to be fixed by the regulation.

ART. 7. The bureau of labor shall publish, monthly or oftener, a Bulletin of the Bureau of Labor (*Bollettino dell' Ufficio del Lavoro*), which shall contain the information referred to in article 1, particularly that pertaining to the countries into which Italian emigration flows. The bureau shall also publish monographs on all the different questions which concern labor.

ART. 8. The publications of the bureau of labor shall be sold or given on subscription at the price of the postage. They shall, however, be sent gratis to such labor organizations as request them.

ART. 9. Local authorities, reform associations (ethical bodies), agricultural, industrial, commercial, and labor associations, and the local bureaus of labor are required to furnish to the bureau of labor the knowledge and information that may be requested of them in the performance of its duties. All communications addressed by them to the bureau of labor shall be transmitted post free.

ART. 10. Any person who shall refuse to furnish knowledge or information requested by the bureau of labor, or who shall knowingly falsify such information, shall be punished by a fine of not less than five lire (\$0.97) and not more than fifty lire (\$9.65).

ART. 11. In the bureau of labor shall, by degrees, be assembled, under royal decrees, all the services pertaining to labor and to mutual or other insurance.

For the personnel of this bureau there is authorized an annual budget not to exceed 50,000 lire (\$9,650), and for the extra expenses incident to organization provision shall be made on the accounts of the budget of the ministry of agriculture, industry, and commerce, for the fiscal year 1902-3.

ART. 12. In the budget of the ministry of agriculture, industry, and commerce, for the fiscal year July 1, 1902, to June 30, 1903, shall be placed the sum of 50,000 lire (\$9,650) for the expenses of the bureau and the council of labor.

ART. 13. A regulation, to be approved by royal decree, after hearing by the council of state:

Shall make rules for the operation of the bureau of labor, specify its powers—those of the council of labor and of the permanent committee—within the limits fixed by the present law;

Indicate the methods by which the chambers of commerce, the meetings, the federation, the league, and the association mentioned in article 2 shall proceed to the election of their representatives from persons belonging to the same, respectively; and

Determine what further action is necessary to the execution of this law.

A part of the personnel of the bureau of labor shall be selected from economic and statistical educators on the competitive basis of their reputations.

ART. 14. The present law shall take effect the 1st of July, 1902.

The regulations provided for in article 13 of the law, and approved by the Royal decree, dated January 29, 1903, are as follows:

ARTICLE 1. The bureau of labor shall make studies and researches:
On the conditions of the individual industries—manufacturing,

agricultural, forestry, mining, and transportation; of the trades, the mercantile industries, and, in general, of every form of production, public or private—with the purpose of ascertaining their economic situation, the cost of production, and the profits of the same.

2. On the conditions of the labor market for the different branches of industry, arts, and trades, and on the various forms of labor contracts; on labor by the day and by contract; on the conditions of apprenticeship, and whatever else concerns the regulation of labor.

3. On the number and classification of workmen by grade of labor, by sex, and by age; on unemployment, the localities and seasons in which it chiefly occurs, its causes and effects, and on means adopted or to be adopted to remedy it.

4. On the economic conditions of workmen and apprentices of both sexes, especially as regards wages and the methods and forms of paying the same, profit sharing by the workmen, the hours of labor and of rest, by industries and by classes, sex, and age of the work people.

5. On the retail prices of the commodities and articles of ordinary consumption by the working classes, and on the cost and conditions of housing the latter.

6. On the cost and manner of living of the various classes of laborers.

7. On the conditions as to health and safety of the different forms of labor, regard being had also to the localities where the labor is performed.

8. On the number of labor accidents, according to their form and nature, the different kinds of labor, the duration of the disability, and the age and sex of the persons injured; on the causes and consequences of accidents.

9. On the forms and frequency of diseases and on the mortality among the working classes, separately by industries, sex, and age, with special regard to diseases arising from the nature of the employment, from the situation and character of the dwellings, and from the food consumed.

10. On the number of workmen annually rejected as physically unfit for military service, classified according to cause of rejection and occupation.

11. On the number and causes of disputes between employers and employees and of strikes, separately by industries, and by number and classes of laborers participating; on the forms, methods, and conditions of settlement, and on the consequences to the establishments as well as to the work people; on the results of statutory or voluntary institutions for improving the relations of employers with employees.

12. On syndicates, industrial, agricultural, and other; on the state and development of every form of association among employers and managers or among workmen.

13. On saving and cooperation among workmen; on the other forms of provident enterprise, and on the results of the institutions of every kind, and the measures adopted by public authorities or private persons to improve the moral and intellectual conditions and increase the material well-being of the laboring classes, or to alleviate their hardships.

14. On the effects of the laws, regulations, and arrangements which more particularly concern labor and laborers.

The studies and investigations indicated in paragraphs 1 to 7 and in paragraph 12 of this article shall be done for this country, and also for those foreign countries to which Italian emigration is mainly directed, and shall be conducted so as to show the comparative conditions of labor in our country and in those countries.

ART. 2. (Substantially repeats provision of the law, Art. 1b.)

ART. 3. The minister shall present each year to the two houses of Parliament a report on the operation of the bureau of labor, and on the results of its work and that of the superior council of labor in the preceding year.

ART. 4. For its studies and investigations the bureau of labor shall have recourse to the other departments of the Government as well as to the authorities and associations indicated in article 9 of the law, and, so far as needful, to private correspondents in Italy and abroad. It may make use also of the work of the diplomatic and consular agents and other Italian officials abroad; of chambers of commerce and of other Italian associations abroad. Finally, the bureau can place itself in direct correspondence with foreign bureaus of labor, and with associations or other bodies in foreign countries which have the purpose of aiding the working classes.

ART. 5. The information gathered by the bureau of labor shall be examined and systematized by the same, and, when expedient to do so, shall speedily disseminate by the press and by other means which the ministry may from time to time deem suitable.

ART. 6. The bulletin of the bureau of labor shall contain, particularly, information on the state of the labor market in the Kingdom and abroad, and on unemployment; on disputes between employers and employees; on strikes and the cases and modes of conciliation and arbitration, as also on agreements establishing new conditions of labor; on variations in wages and length of the working-day; on retail prices of the principal commodities; on industrial and workingmen's organizations; on bureaus of labor; on questions of law relating to labor; on emigration from Italy to foreign countries, and on the development of labor legislation in Italy and abroad.

ART. 7. By suitable supplements to the bulletin the bureau of labor shall publish the results of investigations and special studies on subjects of particular interest to labor.

ART. 8. The superior council of labor shall be convened by the minister in ordinary session once a year, and in extraordinary sessions when required by the regular progress of its work.

* * * * *

The minister shall designate the reporter for each subject entered on the calendar.

ART. 9. The council shall elect from its members three vice-presidents, who shall be selected, one from the employers, one from the workingmen, and one from the other councilors.

The minister shall select from the personnel of the bureau of labor two clerical secretaries and two secretaries on the part of the council.

ART. 10. For the purpose of making the investigations provided for in article 4 of the law and of proposing measures for adoption concerning the matters investigated, the council shall propose to the minister the investigations and works to be executed by the bureau of labor, and shall have power to interrogate, or, with the approval of a minister, to summon to its meetings employers and workingmen.

or other persons well known to be competent as experts in sociological matters.

ART. 11. In addition to the studies and investigations referred to in the preceding article, the council shall propose such others as it deems expedient to have made by the bureau of labor; examine and discuss their results and suggest to the minister the appropriate measures.

* * * * *

ART. 12. (Relates to publication of proceedings of the council in the Bulletin.)

ART. 13. The permanent committee of the superior council of labor elects from its members its president and two vice-presidents, of whom one shall be chosen from the workingmen councilors.

The secretariate of the council discharges the same functions for the permanent committee.

ART. 14. The director of the bureau of labor has the right to be present at the sessions of the committee.

The members of the council who are not members of the committee may be present at the sessions of the latter, but may not participate in its discussions nor vote, nor have any title to remuneration.

ARTS. 15-27. (Relate to details of process in electing councilors of the various constituencies, and to mileage and per diem.)

ART. 28. The superior council of labor may make regulations for the conduct of its discussions, for authentication of elections [of councilors], and for its own work and that of the permanent committee.

The royal decree of November 13, 1902, prescribing the number, grades, etc., of officers and employees of the Italian bureau of labor created by the law of June 29, 1902, is as follows:

ART. 1. There is established under the ministry of agriculture, industry, and commerce a bureau of labor, which shall be constituted as a division under the immediate authority of the minister and the undersecretary of this ministry.

The division shall be formed in two sections, and shall be composed of the personnel indicated in the following article:

ART. 2. The present register of the ministry of agriculture, industry, and commerce is increased by the following positions:

Grade, class, and number of positions in each.	Individual salaries.		Total of salaries in each class.	
	<i>Lire.</i>	<i>Dollars.</i>	<i>Lire.</i>	<i>Dollars.</i>
Administrative positions:				
1 division chief of the second class	6,000	1,158.00	6,000	1,158.00
2 section chiefs of the second class	4,500	868.50	9,000	1,737.00
3 clerks of the second class	3,500	675.50	10,500	2,026.50
1 clerk of the third class	3,000	579.00	3,000	579.00
2 assistants of the first class	2,500	482.50	5,000	965.00
3 assistants of the second class	2,000	386.00	6,000	1,158.00
Accountant grade:				
1 assistant of the first class	2,500	482.50	2,500	482.50
1 assistant of the second class	2,000	386.00	2,000	386.00
Messenger grade:				
2 messengers of the second class	1,800	347.40	3,600	694.80
Attendants:				
1 doorkeeper	1,300	250.90	1,300	250.90
1 doorkeeper	1,100	212.30	1,100	212.30

Total number of positions, 18; aggregate cost, 50,000 lire (\$9,650).

ART. 3. The head of the division hereby established shall exercise the functions of director of the bureau of labor.

ART. 4. The place of chief of division of the second class, one of the two places of section chief of the second class, and the place of clerk of the third class in the administration grade shall be filled by the method of open competition.

The competition shall be opened by the minister of agriculture, industry, and commerce among economic and statistical educators, including those attached to government offices who possess a university degree or the diploma of an institution of superior instruction.

ART. 5. The incumbents of the other positions, except those indicated in articles 6 and 8, shall be appointed by the minister of agriculture, industry, and commerce from the personnel of the respective grades—administration, accountant, and regular—of that ministry, or, in exceptional cases, from other ministries.

ART. 6. Provides that positions becoming vacant in consequence of promotions occurring through appointments under the preceding article shall be placed in competition by the minister, on the basis of record and examination, amongst the extra persons then in the service of the ministry of agriculture who possess the qualifications required for admission to each of the three categories—administrative, accountant, and messenger. The examinations are to be by the regular methods already prescribed.

ART. 7. Prescribes that those extra persons serving in the ministry who have already become eligible by examination, etc., need not stand a new test, but are to be appointed according to priority in their respective grades, to fill vacancies in the lowest grade and class of the three categories.

ART. 8. Provides for filling the two doorkeepers' positions—the higher by promotion, the lower and the vacancy made by the promotion from persons in the service of the ministry, all according to rules already in force.

It is thus seen that very complete provision has been made for a service for the collection and dissemination of labor statistics and for a superior council of labor with duties to some extent analogous to those of similar bodies in Belgium and France.

The work of the bureau is distributed among three divisions or sections devoted respectively to the following subjects:

Section 1. Administrative affairs.

- a* Records (minutes of proceedings).
- b* Accounts.
- c* Administration of the law concerning prudhommes.
- d* Administration of the law concerning female and child labor in factories, quarries, and mines; supervision.

Section 2. Statistics and economics.

- a* Industrial organizations.
- b* Workingmen's unions (labor councils, trades federations).
- c* Strikes.
- d* Migration.

Section 3. Social legislation.

- a* Proposed legislation.
- b* Comparative labor legislation.
- c* Labor jurisprudence; questions arising in the application of the laws.

Up to this time the department has published nothing more than the bulletin and the reports of the superior labor council. The work which it has in hand, however, is indicated in the following extract from a statement of the present director of the bureau:

The first task which was assigned to the bureau was of an urgent character. It was a preparatory study of the application of the law relating to the employment of women and children, which was necessarily placed before the Superior Council of Labor at its first session.

Among the other questions holding preeminence in demanding attention were the proposed laws relating to the weaving industry, and to the production of sulphur in Sicily, and the application of the law concerning labor in the rice fields.

Closely related to the application of the existing laws and to the labor regulations to be made in future is the task, which now awaits the attention of the bureau, of preparing a law which will organize the inspection service on a strong and rational basis.

No less important in itself and in its relation to the future prosperity of this new bureau is the statistical investigation concerning the organization of laborers and of employers, upon which the superior labor council has determined, and which the bureau of labor has undertaken, by preparing schedules of inquiry which have already been distributed among the councils of labor, the "*leghe di resistenza*," and trade federations. In the meantime, a request was placed before the chambers of commerce for information concerning industrial societies, in order that they might also be comprised within the scope of the inquiry.

This study is intimately related to the future activity of the office, and it is proposed to propound a list of questions to the labor organizations and to employers' unions designed to bring out such information as will serve to prepare necessary material for the bulletins and other bureau publications.

The bureau has likewise begun a mathematical statistical study of rates necessary for a system of insurance against the pecuniary loss sustained by the operation of article 6 of the law of June 29, 1902, which prohibits women from engaging in industrial labor for one month after confinement.

The bureau is also occupied with the question of strikes, which will constitute one of the most interesting features of the monthly bulletin.

The bureau, furthermore, has instituted a study of the reform of the law concerning the councils of prudhommes.

With two lists of questions, one directed to the chambers of commerce, and the other to the presidents of the councils of prudhommes, it has already collected important information on the duty, expenses, and inconveniences of that service.

Another series of investigations are those regarding contract labor. Recently the bureau, through three circulars, the first to the prefects, the second to the council of prudhommes, and the third to the labor councils, has made a collection of factory regulations, collective contracts, and the decisions of the councils of prudhommes.

NETHERLANDS.

Until recent years labor statistics occupied but a very small part of the attention of the various statistical services in the Netherlands. The earliest statistical service was a commission (*Commissie voor de Statistiek*) which existed from 1826 to 1830. From 1830 to 1848 there was no statistical service of any kind in Holland. In 1848 a division of statistics (*Bureau van Statistiek*) was created in the ministry of the interior. This bureau continued until 1878. In 1858 a royal statistical commission (*Rijkscommissie voor Statistiek*) was appointed, but it was discontinued in 1861. In 1892 a central statistical commission (*Centrale Commissie voor de Statistiek*) was appointed. In 1899, by virtue of a royal decree, a reorganization of the statistical service resulted in the creation of a central statistical bureau (*Centraal Bureau voor de Statistiek*) in the department of the interior, and since its organization the functions of the central commission have been only advisory.

This new bureau has given considerable attention to labor statistics. It publishes statistics of labor councils, provident institutions, strikes, and other labor statistics.

Following is a list of the publications containing labor statistics issued by this bureau since its organization:

Statistical Annual of the Kingdom of the Netherlands. (*Jaarcijfers voor het Koninkrijk der Nederlanden*.) The Kingdom in Europe: First report for the year 1898. The Colonies: First report for the year 1897. The statistical annuals for the years 1881 to 1891 were published by the Netherlands Statistical Society, and for the years 1892 to 1896 and 1897, respectively, by the central statistical commission.

Monthly Statistics and Other Periodical Information concerning the Netherlands and the Dutch East Indies. (*Maandcijfers en andere periodieke Opgaven betreffende Nederland en de Koloniën*.) Usually two numbers are issued per year. The first two numbers of the present series were for the year 1899. The old series for the years 1893 to 1898 were published by the central statistical commission.

Review of the Central Bureau of Statistics. (*Tijdschrift van het Centraal Bureau voor de Statistiek*.) Appears at irregular intervals. The first number was published in 1902 and 4 numbers appeared in 1903.

Contributions to the Statistics of the Netherlands, New Series. (*Bijdragen tot de Statistiek van Nederland, Nieuwe Volreeks*.) Appear at irregular intervals. The first number of the present series was published in 1900. The old series was published from 1894 to 1898 by the central statistical commission.

Nos. V, XIII, XIX, XXIX. Statistics of provident institutions in the Netherlands (*Statistiek der Spaar- en Leenbanken in Nederland*). For the years 1898, 1899, 1900, and 1901.

No. XII. Report of the census of occupations of December 31, 1899 (*Uitkomsten der Beroepstelling in het Koninkrijk der Nederlanden gehouden op 31 December, 1899*).

Nos. XVI, XXXV. Reports on Wages and Hours of Labor on State Works (*Overzicht betreffende de loonen en den arbeidduur bij Rijkswerken*). For the years 1899 and 1902.

No. XXIV. Housing Statistics of December 31, 1899 (*Uitkomsten der Woningstatistiek van 31 December, 1899*).

No. XXVI. Report on Market Prices of Grain at Arnhem in the years 1544-1901 (*Overzicht van Marktprijzen van Granen te Arnhem in de jaren 1544-1901*).

The Review (*Tijdschrift*) of the central bureau of statistics contains statistics of labor councils and exchanges, prices, wages, strikes, and lockouts, and other statistical information, much of which relates to labor conditions.

The central bureau of statistics is at present occupied with an inquiry concerning workmen's associations, which is intended to be a continuation of the statistics collected and published in 1896 by the central statistical commission. The bureau also proposes to publish statistics concerning cooperation, workmen's insurance and savings, the housing of the working people, prison labor, etc.

Among the more important labor statistics published before the organization of the present central bureau were the following by the central statistical commission, which appeared in the old series of "Contributions to the Statistics of the Netherlands:"

Wages and Hours of Labor in State Works in 1894 (*Overzicht van de loonen en den arbeidsduur bij Rijkswerken in 1894*), published in 1896.

Statistics of Labor Organizations (*Statistiek der Arbeidersverenigingen*), 1894.

Statistics of Trade Associations (*Onderzoek naar de geschiedenis en werkzaamheid der Vakverenigingen*), 1896.

The ministry of the interior publishes the annual reports of the local councils of labor.

The central statistical bureau is under the direction of Dr. C. A. Verrijn Stuart.

NEW SOUTH WALES.

A Government labor bureau of employment was created in New South Wales in 1892, but its operations under the direction of the labor commissioners were confined to matters concerning the employment of labor in Government and other works. A department of labor and industry, with larger functions was, however, created in 1895 under the minister of public instruction, whose office and duties were enlarged to this extent. This department includes the labor bureau with its duties as defined above, and in addition has charge of the general statistical work of the Government and the administration of the factory act, the early closing legislation, the shearers' accommodation act, and other industrial measures.

Its personnel includes the Government statistician, the clerk in charge of labor and industry, the labor commissioners, and a corps of clerks, compilers, typewriters, etc. For the fiscal year 1902-3 the appropriation for the support of the office of the Government statistician was £9,750 (\$47,448.38); that for the support of the office in charge of factory inspection and the administration of labor laws, £3,929 (\$19,120.48), and that for the labor bureau of employment, £8,373 (\$40,747.20)—a total for these three services of £22,052 (\$107,316.06).

The work of the Government statistician and his assistants is confined wholly to the compilation of statistics, and while certain industrial statistics are annually compiled and published the greater part of the work of this branch of the service is concerned with the collection of vital and other statistics having no special bearing on labor matters. The clerk in charge of the department of labor and industry and his assistants confine their work to the inspection of factories and the administration of the labor laws of the colony, while the labor commissioners are concerned wholly with the administration of the affairs of the labor bureau of employment.

A compilation of the statistics of the colony is issued periodically by the Government statistician and an annual report by the department of labor and industry. As has been seen, the service in New South Wales differs materially from that of other States and countries, but it is claimed that many substantial reforms in the way of needful labor legislation have been in a large measure due to its work.

NEW ZEALAND.

The department of labor of New Zealand was not established by a specific statute, but, starting in 1891 with the present secretary for labor, Mr. Edward Tregear, as the entire personnel of the office, it has grown to considerable proportions. Its creation is attributed largely to the results of an industrial depression which followed the great maritime strike. The necessity of dealing with the large numbers of unemployed laborers and of relieving their needs led to the establishment of State cooperative works. In this work the labor department acted as labor agent, and to this function the duties in connection with the administration of the factory act, the arbitration act, etc., were added as time went on.

The secretary for labor, who has been connected with the service since its establishment, is the chief inspector of factories and also the registrar of industrial unions. His salary is £450 (\$2,189.93) per annum. The personnel of the department includes in all 14 employees of various grades at the headquarters at Wellington, and 14 inspectors and clerks located at various points in the colony. In addition, 160 police officers act as inspectors of factories and agents of the department, those in the larger towns receiving small bonuses, ranging from £2 2d. (\$9.77) to £15 (\$73) per annum for the extra service. A number of the clerks are engaged on temporary service at small salaries. The permanent force, however, many of whom have been in the service for years, receive salaries fairly commensurate with the services and duties required of them. A chief clerk receives £350 (\$1,703.28) per annum; a clerk, £180 (\$875.97); a stenographer, £175 (\$851.64); while factory inspectors receive from £130 to £215 (\$632.65 to \$1,046.30). The annual appropriation for salaries in the department

approximates £3,135 (\$15,256.48); that for the expenses of the department is £3,000 (\$14,599.50); while the expenses of the administration of the industrial conciliation and arbitration act, including the payment of fees of members of the court, amount to £3,750 (\$18,249.38). The total annual appropriation for these services approximates £9,885 (\$48,105.35).

The department of labor in New Zealand is not specially concerned with the collection of statistics, its principal duties being in connection with the administration of the labor laws of the colony. The officers of the department act as labor agents for the unemployed, as factory inspectors, and inspectors of shops and offices; they also maintain a registry office for servants, act as registrars of trade unions, and in a general way administer the labor laws of the colony.

The statistical and other information of interest to labor which this office secures and publishes is derived mostly from the applications for registry under the factory act and from the personal investigation of the factory inspectors and other officers of the department. No attempt is made to gather general statistics which come under the jurisdiction of the census department. An annual report is printed, the edition being 650, and since March, 1893, a monthly bulletin entitled the "Journal of the Department of Labor." The edition of the latter is 1,125 copies monthly. It is claimed that almost all of the so-called "advanced legislation" of New Zealand has had its conception in the labor department and its reports. A very complete review of these laws and the general conditions of labor in this colony appears in Bulletin 49 of the United States Bureau of Labor.

NORWAY.

There is in Norway no special bureau for the collection of statistics of labor, but quite recently a division has been established in the central statistical bureau (*Det Statistiske Central-bureau*) charged with this duty. The establishment of this division followed a resolution of the Storting (the Parliament of Norway) on April 2, 1902, in which the Government was requested to consider the question of extended investigations into the statistics of labor with special reference to the conditions as regards unemployment. In compliance with this request the central statistical bureau was charged with this task by the Government, a special division being created in the bureau for that purpose. The resolution of the Storting is said to have been due to an address from unemployed laborers in Christiania, pointing out some measures it was suggested should be taken. Among other things it was suggested that the Government be asked to provide means by which unemployed laborers could be informed where work could be secured. A motion made by the democratic labor organization of Christiania respecting pecuniary assistance to the unemployed of the

city may also have contributed to the passage of the resolution which led to the creation of the special service for labor in this country.

The division of labor statistics is under the direction of one of the secretaries of the central statistical bureau, who has two assistants, appointed by the director of the bureau. The secretary receives for this service 2,500 kroner (\$670) per annum, in addition to 1,000 kroner (\$268) paid for other work in the bureau, while the two assistants receive a salary of 1,000 kroner (\$268) each per annum. These expenses, together with an appropriation of 640 kroner (\$171.52) for the printing of a monthly bulletin, 300 kroner (\$80.40) for the printing of schedules and circular blanks, and 1,060 kroner (\$284.08) for other expenditures, brings the total of the annual expenses of the division up to 6,500 kroner (\$1,742). The work of the division began April 1, 1903, and its principal publication will be a monthly bulletin.

It should be stated that the central statistical bureau has at various times collected and published statistics of labor in connection with its other work. In 1892 three volumes relating to social statistics were issued, while for a number of years it has published quinquennial statistics of wages.

ONTARIO.

By act of March 10, 1882, provision was made for the creation of a bureau of industries in Ontario, under the department of agriculture. The duties of this bureau, however, were confined principally to the collection and publication of statistics and information in regard to agriculture, although in 1884 and several years immediately following efforts were made to include in its work the collection of statistics relative to labor. For several years its reports contained a certain amount of data of this character, but thereafter its work in this direction was discontinued. Later on, in 1900, however, as a result of the activities of the labor organizations of the Province, an act was passed providing for the creation of a bureau of labor, under the department of public works, whose sole duty should be the collection and dissemination of statistics of labor. The organic act of the bureau provides that its chief officer—the secretary, together with such other officers as may be necessary for the proper conduct of the bureau, shall be appointed by the lieutenant-governor. The duty of the bureau, as stated, is to collect, assort, systematize, and publish information and statistics relating to the employment of labor, the wages and hours of labor throughout the Province, cooperation, strikes or other labor difficulties, trades unions and labor organizations, the relations between labor and capital, and other subjects of interest to the working classes, together with such information relating to the commercial, industrial, and sanitary condition of workmen and to the industries of the Province as it may be able to gather.

The personnel of the bureau is as yet very small, consisting only of the secretary and his stenographer, the former receiving an annual salary of \$1,500 and the latter \$500. The entire appropriation for its expenses amounts to but \$3,000 per annum.

The investigations made by the bureau during the three years of its existence have included statistics of wage-earners, their wages, hours of labor and general conditions, inquiries into the growth of industries in the Province and the opportunities in various localities for their establishment, statistics of manufactures, showing the value of product and wage rates, statistics of strikes and lockouts, labor organizations, etc.

Under an amendment to the Trades Disputes Act, passed early in 1902, the secretary of the bureau is given power also to act as conciliator in industrial disputes within the province. Through his mediation a number of difficulties between employers and employees have been satisfactorily adjusted. The enforcement of the factory inspection laws is also one of the duties of this office.

Owing to the inadequacy of the appropriation for its expenses, the collection of statistics by the bureau has been carried on by means of correspondence and circular blanks, both of which methods are said to be very unsatisfactory. Out of the small appropriation for the bureau regular annual reports have been printed, at an expense of \$400, and editions of 5,000 copies each have been distributed regularly.

RUSSIA.

It has been learned from an official source that the proposition has recently been made to create a labor bureau under the Central Statistical Committee (*Comité Central de Statistique*) in Russia. A plan of organization for this bureau is said to be under consideration.

SPAIN.

By a royal decree of August 9, 1903, the Institute of Social Reform (*Instituto de Reformas Sociales*) was established in Spain, under the ministry of the interior. The institute is composed of three sections: A section of statistics, a section of publications, and a section of inspection.

The institute maintains close relations with the ministries of agriculture and justice. These relations are of a kind which give it a very pronounced character of independence, and at the same time have placed it outside of all spirit of party politics. In addition, the council of the institute has been presided over by one of the most prominent Republicans, and is filled with well-known men from all parties.

The special subjects which are committed to the institute for investigation are determined by article 2 of the decree, in which these are arranged in four main groups, as follows:

1. The labor population and its movement in the Kingdom, emigration and immigration, the organization and social aspects of labor in the various industries, the conjugal condition of workingmen, floating and temporary labor, immigrant labor, etc.

2. Workingmen's earnings; wages of adult males, of women, and of children; cost of living; working hours; profit sharing; labor contracts; disputes of employers and employees; workingmen's associations for cooperative production; strikes; the economic condition of labor; imposts and taxes on consumption of the most necessary commodities.

3. Religious, moral, intellectual, physical and hygienic conditions of workingmen and their families; labor accidents, and measures for their prevention; medical attendance of workingmen; disability incurred during labor; invalidity, etc.

4. Trade unions; cooperative associations; savings, deposit, and loan banks; associations for religious ends, for mutual relief, and for recreation among workingmen; apprenticeship courses and special statistics; welfare enterprises, public and private; workingmen's conventions; statistics of labor in foreign countries.

For the conduct of the service, besides the central office, the decree provides for the establishment of special offices in the governments of the provinces. Further, in places where practicable, there are to be appointed special agents serving without pay, their positions being honorary.

Articles 4, 5, 6, and 7 make particular rules for the conduct of the service.

Article 8 provides that companies, firms, and associations of every kind, as also individuals, may send to the central office or the provincial offices information on matters pertaining to the service of labor statistics. Such information may be printed in the periodical publications which the bureau is required to issue.

These publications are to be a monthly bulletin, and an annual report containing the data collected during the year. Workingmen may obtain these publications gratis, but subscription to the bulletin is obligatory for the towns, and the proceeds from sales and subscriptions are to be applied to cover part of the necessary expenses of the service. Particular mention of the work accomplished by the special agents is to be made in the annual statistics in the monthly bulletin.

SWEDEN.

Previous to 1893 various commissions appointed to make reports on topics which were the subject of discussion for proposed legislation had made a number of statistical investigations in regard to subjects of interest to the laboring classes and published the results of their labors, but no regularly constituted bureau of labor was in existence. In 1893 the proposal was first made in the Parliament to establish a bureau of labor statistics, and an investigation relative to the desira-

bility of such action was made by the central bureau of statistics and the royal board of trade (*K. Kommerskollegium*). Finally, in 1896, it was definitely determined to organize a bureau of this character under the supervision of the board of trade, and its work at the outset was to be restricted to statistical investigations on certain subjects only, in order to indicate to Parliament the scope of work most desirable in such an office. For this purpose an appropriation was made amounting to 10,000 crowns (\$2,680) per year for each of the years 1897 to 1902, a total of 60,000 crowns (\$16,080). A portion of the expenses of the bureau, such as office rent, printing, postage, etc., was to be paid out of the funds of the board of trade.

The investigations undertaken and completed during the six years following the creation of the bureau were in relation to labor conditions in the baking industry, in the tobacco industry, in the larger mechanical workshops, and in certain special factories and workshops. As a result of this series of investigations and the tentative work of the bureau it became evident that a permanent organization was essential in order to provide a skilled office force and secure the confidence of the organizations of employers and employees. The bureau (*Afdelning för Arbetsstatistik*) was accordingly organized on a permanent basis in April, 1902, the personnel consisting of a chief actuary in charge, appointed by the King, at an annual salary of 5,000 crowns (\$1,340); two clerks, appointed by the board of trade, at an annual salary of 1,500 crowns each (\$402); three female assistants, appointed by the chief actuary, at an annual salary of 1,000 crowns each (\$268), and a corps of 25 agents for the collection of information and statistics, located in various localities, receiving as compensation from 200 to 600 crowns (\$53.60 to \$160.80) annually. The total appropriation for salaries for the last fiscal year amounted to about 20,000 crowns (\$5,360), the general office expenses and those for stationery, postage, printing, etc., being defrayed out of the appropriation of the board of trade.

Upon the permanent organization of the office it was determined that the work of the bureau should consist first, of the regular collection and publication from year to year of general statistical data on certain labor topics, and second, of special investigations in regard to specified subjects. It was proposed to publish a portion of the material periodically in a bulletin and a portion in a series of annual and special reports. The periodical bulletin (*Sociala Meddelanden*), which appears quarterly, contains a review of the social legislation of Sweden and of foreign countries, digests of social and statistical publications, reports on the state of the labor market, etc. A yearly report is made on strikes and lockouts, and also a yearly special report—the one for the present year being devoted to the results of an investigation into working hours, wages, sanitary conditions, etc., in certain industries

The election of new members of the committee to replace those who have died or resigned will take place upon the nomination of the members belonging, respectively, to the States having a right to the representation.

The vote is by secret ballot, at a meeting of the committee, the notice of which will contain an indication of the candidates presented. The members who do not attend this meeting may send their votes to the president in a sealed envelope.

ART. 9. The committee is competent to pass any resolutions needful for the accomplishment of the object of the association. It shall meet in a general assembly at least once every two years. It may be convoked by the bureau, whenever the latter judges it necessary or when at least fifteen members of the committee request it.

The choice of the meeting place will be made by the consultation in writing of all the members of the committee, by the secretary-general, within a time fixed by the bureau.

ART. 10. The committee elects from among its members a bureau composed of a president, a vice-president, and a secretary-general. The committee also appoints the treasurer of the association.

ART. 11. The mission of the bureau is to take the steps necessary for the execution of the resolutions of the committee. It manages the funds of the association. It makes each year a report to the committee of the administration of its affairs. It appoints the clerks and other persons necessary for the work of the association. It places itself in communication, in all industrial States, with specialists and other competent persons disposed to furnish information regarding the labor laws and their application. These persons receive the title of correspondents of the association.

ART. 12. The secretary-general has charge of the correspondence of the association, of the committee, and of the bureau, as well as of the publications and of the information service.

ART. 13. The treasurer receives the dues and has charge of the funds. He makes no payments without the visa of the president.

ART. 14. A national section of the association may be formed in a country, on condition that it has at least 50 members and pays into the treasury of the association an annual contribution of at least 1,000 francs [\$193]. The statutes of such a section must be approved by the committee.

Such a section has the right to provide for the vacancies which occur on the committee from among the representatives of its country.

The members of a national section have the same rights as those of the association, with the reservation that the publications to be furnished them by the association, as well as the representation on the committee, will be proportionate to its annual contributions.

ART. 15. The present statutes can not be revised, either wholly or in part, except at a meeting of the committee, and then only by a two-thirds majority of the members present, and when the proposition of revision has been inserted in the notice of meeting.

The purposes of the association are stated in the first and second sections of article 2 of the statutes. The primary object of the International Labor Office which is provided for is the collection and publication of the laws of the various countries relative to the protection of labor, but so far the expense of publication of a volume contain-

ing all existing laws has proved to be too great for the resources of the office. As will be seen, however, provision is made in the statutes (article 2, sections 3 and 4) for still further duties for the association. These consist of efforts to facilitate the study of labor legislation in various countries; to furnish members of the association with information as to existing laws in various countries and their application; to further the study of the method of uniformizing the various protective laws, and finally to establish, along uniform lines, international statistics of labor. Another duty is to suggest and aid in convoking international congresses for the discussion of protective labor legislation.

The association itself is composed of all persons and societies who adhere to the objects of the association and pay the annual dues of 10 francs (\$1.93), and is under the direction of a committee composed of members belonging to the various countries which have been admitted to representation, as provided in article 7 of the statutes. The bureau of labor or office of labor, whose officers are elected from among the members of the association, performs its executive functions. This office is located at Basel, Switzerland, and consists of a president, a vice-president, and a general secretary.

The office work is performed by a director, who is the general secretary of the association, and is appointed by the international committee; an assistant secretary, a clerk, and a translator, each appointed by the bureau; and occasional help employed by the director.

In an account of the organization and work of the International Labor Office, by Prof. Stephan Bauer, the director as well as the general secretary of the association, it is shown that the organization of the association dates from the Paris congress of 1900, which "laid the formal foundation stone" for its establishment by formulating and adopting the statutes which have been given. A president was chosen, and Basel selected as the seat of the labor office. The following are extracts from a report by Professor Bauer:

The next thing to be done was to open a correspondence with the various State governments in order to effect a regular remittance of their laws and documents, to persuade the industrial associations and trade unions to intrust the office with the communication of their wishes as to legislation, to make provisions for a working staff, to enter into relations and arrange terms with publishers, and, finally, to find a financial basis for regular organized work.

First of all, provision was made for the rapid circulation of labor laws. Through the mediation of the Swiss department of industry, the State governments were requested to forward their laws direct to the International Labor Office, and thus the grades of diplomatic intercourse, which had hitherto to be observed, were done away with.

For the purpose of official intercourse almost every State has recommended its labor department or the industrial department of its

ministry of commerce to communicate direct with the International Labor Office.

As the sections of the International Association contribute at least 1,000 francs (\$193) each toward the maintenance of the labor office, the expenses of a larger staff, printing expenses, etc., would, on an exclusive private basis, have been unattainable. Therefore the association took steps, as early as the winter of 1901, for obtaining State contributions to the maintenance of the office. Switzerland, as the seat of the office, now secures to them 10,000 francs (\$1,930); France, a subscription of 5,000 francs (\$965) to the subsidy on the publications; the Netherlands, 4,000 florins (\$1,608) to the same fund. The United States agreed to pay an annual subsidy of \$200. After the Basel meeting the German Reichskanzler fixed a subscription of 3,000 marks (\$714), which was by a vote of Parliament increased to 6,000 marks (\$1,428) in 1902. Austria followed with 3,000 kronen (\$609); Italy with 1,000 liras (\$193). The Belgian Government provides the association with 600 copies of its *Annuaire de la Législation du Travail* for distribution free of charge.

According to a statement furnished by Professor Bauer, the actual receipts and expenditures of the International Labor Office during 1902 were as follows:

Receipts: State subsidies, \$6,160; section contributions, \$2,024; contributions from members, direct, \$24; miscellaneous, \$150; total, \$8,358.

Expenditures: Salaries, \$3,000; translation (done outside), \$1,210; traveling expenses, \$174; bureau expenses, stamps, library, etc., \$865; cost of printing the publications, \$3,000; miscellaneous, \$60; total, \$8,309. The amount expended for salaries in 1903 was distributed as follows: Director, \$1,200; assistant secretary, \$600; clerk, \$480; translator, \$480; occasional help, \$240.

The information and statistics are secured by the bureau through correspondence and circular blanks. These are directed to factory inspectors, economists, etc. The director believes that correspondence and circular blanks should be used to get information only from persons who (1) are free from personal interest in the influence of the reply, (2) have sufficient economic training, (3) can verify their statements from daily experience or from accounts.

In reference to the Bulletin of the International Labor Office, which is its chief publication, Professor Bauer speaks as follows:

The information which labor departments publish in their different publications chiefly concerning the conditions and rights of labor in their respective countries is concentrated in the Bulletin of the International Labor Office. The bulletin is not intended to meet the demands of local social political interests. It aims before all at completeness in its records of social legislation. In the introduction this progress is historically analyzed, mostly on the basis of reports and parliamentary bills, proposals, etc. This analysis is not intended to be a criticism of social legislation. Being purely a source of information, the bulletin can not replace the perusal of critical journals, such as the "Archiv" for Social Legislation, the "Soziale Praxis," or the

Bulletin of the Labor Department. Then, again, these publications are not pledged to completeness or to literal translation of the laws of all industrial communities.

The Bulletin contains the texts or the contents of recent labor laws, parliamentary work leading toward such laws, resolutions of congresses concerning them, and a bibliography of social reform.

It is much to be regretted that, owing to financial motives, no English edition of the bulletin could be arranged. If once an American and a British section of the International Association were established, the issue of an English edition, as demanded in the statutes, would afford no difficulties.

The sifting of law texts, the revision of about 300 industrial union reviews—of the protocols of parliamentary debates—and of about 1,000 newspaper cuttings monthly, in addition to a correspondence now swollen to about 3,500 letters yearly, which all keeps the office staff, their correspondents and translators, fully employed, is increased by the preparation of information and the issue of reports for delegate conferences.

It is stated that the preparation of reports on particular topics for various conferences and congresses form, perhaps, the most interesting part of the scientific work of the labor office.

Following are the publications of the International Labor Office:

Bulletin of the International Labor Office. (*Bulletin de l'Office International du Travail.*) Published at irregular intervals since the beginning of the year 1902.

The Night Work of Women in Industry. Reports on the importance of its legal regulation. (*Le Travail de Nuit des Femmes dans l'Industrie. Rapports sur son importance et sa réglementation légale.*) 426 pages. 1903.

Dangerous Industries. Reports on the dangers and the means of their prevention, particularly in match factories and factories which make or use lead colors. (*Les Industries Insalubres. Rapports sur leurs dangers et les moyens de les prévenir, particulièrement dans l'industrie des allumettes et celles qui fabriquent ou emploient des couleurs de plomb.*) 503 pages. 1903.

Quoting again from Professor Bauer:

The investigations into the question of night work for women, as well as that of dangerous industries, were started both by the sections which sent in independent reports on the subject and by the labor office, which filled up the gaps resulting from the organization of the association in countries where there are no sections, by means of its correspondents and experts—e. g., in United States by Professor Adna F. Weber; Great Britain, by Miss A. M. Anderson, H. M., principal lady inspector, and Mr. George Wood. The International Labor Office had not only to collect and submit these reports to the committee, but to lay before them a summary touching the state of the laws which, together with the reports which form, as it were, a living commentary on such laws, could be looked upon as forming the basis of the committee conference.

The International Labor Office published in 1903, bimonthly, 3,000 copies of the bulletin, of which 2,000 were in the German language and 1,000 in the French language; 2,225 copies of the annual report, of which 1,300 were in the German language and 925 in the French

language. The cost of printing the German bulletins was \$1,100 and the French bulletins \$800; the German annual reports \$150 and the French annual reports \$130. The expenditures for the reports on night work of women and on dangerous industries aggregated \$1,000.

In a review of the work of the International Labor Office, Professor Bauer remarks as follows:

Being of a purely scientific character, the International Office, although established by a private association, has in two years of unpartisan work been able to enlist the support of all European and of the United States Governments. The most eminent representatives of factory inspection in Germany, Belgium, Denmark, France, Great Britain, Victoria, New Zealand, the Netherlands, Russia, and Switzerland have contributed to the office's reports. It is much to be hoped that the interest which international economic questions have lately evolved in Great Britain may extend to the field of labor legislation.

The future work of the International Labor Office depends upon the action of the international committee. The questions of industrial poisons (other than phosphorus, lead, and lead colors), of the work of children and minors, of home work, and of social insurance of foreigners are under consideration. As soon as a certain uniformity in social statistics shall have been obtained, the publication of an international labor annual will be possible.

VALUE AND INFLUENCE OF LABOR STATISTICS.^(a)

BY CARROLL D. WRIGHT.

There are now in the United States, besides the Federal Bureau of Labor, thirty-two State bureaus or departments devoted to the collection of statistics of labor by means of original investigations. Besides these, the Federal Bureau of the Census and the Bureaus of Statistics of the Department of Commerce and Labor and of the Agricultural Department, the departments and boards of agriculture of the various States, and various other offices may be considered as publishing labor statistics in some degree. But I speak here of the value and influence of those offices first mentioned—those devoted specifically and technically to the investigation of social and industrial conditions and to the publication of distinctive labor statistics. These offices had their foundation in the establishment of the Massachusetts bureau in 1869. Gradually other States created bureaus of statistics of labor, and in 1884 the United States Government added its own office to those already in existence. All the offices, together, have published nearly 500 octavo volumes, covering a great variety of topics and the results of investigations relative to almost every condition and environment of the workingman.

The character and quality of the work of the different offices varies in some degree, due to a considerable extent to the short tenure of the heads of the different bureaus. Where the governor of a State has allowed himself to ignore politics and insisted upon scientific work, the bureaus have achieved the greatest success; but as a rule a governor feels that the office of the chief of the bureau of statistics of labor of his State must be filled by somebody from his party, without reference to the skill, the experience, or the integrity of the incumbent under the previous administration. Yet I am glad to say, as the result of pretty careful study of the reports of all the officials who have done duty in this country during more than thirty years, that no matter for what reason they were appointed, no matter how inexperienced in the work of investigation and of compilation and presentation of statistical matter, no matter from what party they came, and whether in sympathy with capital or with labor, and even if holding fairly radical socialistic views—the men have, almost without exception, at once comprehended the sacredness of the duty assigned them, and have served the public faithfully and honestly, being content

^a Revised from an article in the *Engineering Magazine* of November, 1893, and printed with the consent of the publishers.

ductive establishments. These inspectors enforce the laws concerning the hours of labor, the employment of women and children, the guarding of machinery so that the operatives may be more free from accidents, and in all ways undertake the enforcement of all laws of the character specified. Through these efforts (and they were largely induced by the reports of labor statistics) child labor has decreased, accidents have been reduced in number and severity, the hours of labor have been shortened and recognized, and so all along that line of facts the influence of the reports of the bureaus has been enormous; the value of their statistics can not be expressed by figures.

The first ten-hour law in this country was passed by the Massachusetts legislature in 1874. The statistics published by the bureau of that State helped the passage of the law in a marked degree, and saved its repeal in later years. The manufacturers, finding that they were brought under the ten-hour law so far as minors and women were concerned, felt that the manufacturers in surrounding States ought to be brought under like laws or the law of Massachusetts should be repealed, for they claimed, as was claimed in England years ago, that in working under a ten-hour law the manufacturers of Massachusetts were placed at a decided disadvantage relative to the manufacturers in the surrounding States. The legislature therefore directed the bureau of statistics of labor to investigate the subject of the hours of labor in that State and in the other New England States. The result of the investigation showed that under a ten-hour system the Massachusetts manufacturers paid more wages than those in the other States, where eleven and twelve hours were the rule; that they produced more goods on any basis that could be named, whether per individual or per machine; in short, that in every respect the Massachusetts operatives were under better conditions than those of the surrounding States. There has been no attempt since that report was published to repeal the ten-hour law of Massachusetts. On the other hand, other States have followed suit, until now that system prevails generally in the United States.

The bureaus have been very influential in securing a modification of the old common-law rule relating to the liability of employers for accidents occurring to their employees. Under this rule a workman can not recover damages for injuries received through the carelessness or negligence of a coemployee, although a stranger might recover damages for an injury following the same carelessness or negligence; as, for instance, under the old common-law rule, a brakeman on a train running perhaps 500 miles could secure no damages from a railroad corporation in consequence of injuries received through the carelessness or negligence of a switchman along any part of the line, although the brakeman knew nothing of the switchman, had no knowledge of his skill or capacity when he engaged with the company, and in no sense

of the word, so far as reason is concerned, could be considered the coemployee of the switchman; yet, although that common-law rule grew up before great industrial enterprises were established, judges had adhered to it and had ruled that in such a case as that just mentioned the switchman and the brakeman were coemployees, and therefore the employer could not be held liable. The agitation for a legislative change in this common-law rule in England resulted in the enactment of a law in 1880 changing or modifying the rule, and in this country, the matter being taken up by bureaus of statistics of labor, several legislatures have been convinced of the justice of a change, and have therefore made it; the dire results which were predicted as sure to follow the change of the rule have not followed. In this direction the bureaus have done a great service; not only to the employees of railroads and corporations engaged in productive industry, but in securing the public against the employment of incompetent men.

Another very emphatic influence which the bureaus have exercised is in the abolishment or modification of what is known as the "truck-store" system, or, as it is more popularly known in some parts of the country, the "pluck-me" method of store trading. This system consists in the establishment of a store by the proprietors of a works for the supply of its employees. Formerly, in many instances, the prices charged at these stores were much higher than those charged at other places, and so the employee of a concern having a truck store was almost compelled, and in many instances actually compelled, to purchase the necessities of life for his family at an exorbitant price, whereby the employer made a second profit on the labor of the employee. In very many instances the workmen of such an establishment never saw any money from one year's end to another. The pay for the goods purchased in the store was secured by the pay rolls, and the debts and credits left no margin on pay day. Early in the existence of bureaus of statistics of labor this system was attacked through the statistical method, and the result has been that in very many States laws have been passed making it a criminal offense, in some cases, to carry on such a system, and in other cases making it the duty of the proper officers to see to it that they are regulated. The evils of the truck-store system have not yet been entirely eradicated in this country, but the change has been great, and the value to the wage receiver of the greatest importance.

In this connection I might mention the influence which the bureaus have had in securing more frequent payments for the workingman. Formerly the payments were monthly. Under this system the credit system grew also, because without ready money the wage receiver must secure credit of his grocer, and the grocer, under such circumstances, looks out that the charges are sufficient to cover the delay in

of statistics of labor undertook to investigate this subject, through the offices of the registers of deeds, the boards of assessors, etc., and in these two States the mortgage indebtedness, as established and estimated by the commissioners of labor, was, for Ohio, \$330,999,205, and for Michigan, \$129,229,553, instead of the amounts popularly claimed. Under the Federal census of 1890 an investigation was made relative to mortgage indebtedness, and the facts established with remarkable accuracy for the other States just named. By the investigation of the census it was shown that in Indiana the mortgage indebtedness was \$110,730,643; in Illinois, \$384,299,150; in Wisconsin, \$121,838,168; and in Iowa, \$199,774,171. It is a little remarkable that the sums accepted in a popular way for the mortgage indebtedness of the States named were in some instances exactly the valuation of all the property of the State. The extravagant figures quoted were used all over this country and in Europe, wherever capitalists were seeking investments in this country. The figures did immense harm; the wrong can not be calculated; but as time goes on the statistics emanating from bureaus of statistics of labor and from the Bureau of the Census are removing the apprehension which grew out of the original statements.

With regard to the causes for which mortgages are placed upon farms in the western country, it has been claimed in recent years that the great mortgage indebtedness of Western States is due largely to disaster or adversity. The commissioner of labor of Nebraska undertook to satisfy himself, by positive investigation, as to the truth or falsity of such claims, and he took as the territory for his investigation the county of Sarpy, covering the period from December 31, 1879, to January 1, 1890. Sarpy is one of the oldest counties in Nebraska, and it therefore offered the best opportunities for investigation in that State. The result, as to the causes for the creation of the mortgage indebtedness of the county, is shown in the following statement, taken from Commissioner Jenkins's report for 1889-90:

	Per cent.
Purchase money	58.00
Permanent improvements.....	3.00
Purchase of stock	4.00
To meet personal obligations	.50
To invest in real estate	7.00
To invest in mercantile business.....	20.00
Sickness	.25
Unknown causes	7.25

Allowing that all the mortgages from sickness and from unknown causes were the result of misfortune or of adversity of some kind, the foregoing table shows that 92½ per cent were for legitimate causes, and such causes as indicated prosperity rather than adversity.

The investigation under the Eleventh United States Census comprehends the object of indebtedness for 102 selected counties in several States, the results being obtained by personal inquiry through the

experts of the Office. That investigation is a clear and emphatic corroboration of the results arrived at by Commissioner Jenkins of Nebraska. It shows that to legitimate objects, indicating clearly prosperity and advancement, 94.37 per cent of all the mortgage indebtedness of the 102 counties considered must be attributed.

The convict labor question is one that has attracted a great deal of attention during the last quarter of a century, but it was not until various State bureaus and the United States Bureau of Labor collected exhaustive statistics relative to productive employments in penitentiaries and other penal institutions and showed the effect of different systems of employing convicts that the discussion took intelligent shape. There has been much reform along the lines of convict labor. Many States have made experiments which have been abandoned, while others have established new systems which are progressing favorably. In the whole work the contributions of the bureaus of labor statistics have been of the greatest possible value.

The advancement of technical science, too, has been greatly accelerated by the exhaustive publications of different departments and bureaus of statistics of labor relative to industrial education. It is only recently that the different States of the Union have felt it incumbent upon them, through their legislatures, to study all the phases of industrial training, consisting of manual training, trade school instruction, and the higher technological or university work which is done in our institutes of technology. The United States Bureau of Education has aided the discussion and consideration of such matters, and its work has been grandly supplemented by the State bureaus and the United States Bureau of Labor. It is now possible to discuss the question of industrial education in all its phases not only intelligently but on the basis of practical experience in this and other countries.

These few instances show the enormous value of statistics in removing apprehension and in correcting erroneous views. The money value of such information is not easy to calculate.

In September, 1883, the heads of the few bureaus of statistics of labor then existing met at Columbus, Ohio, and organized the National Convention of Chiefs and Commissioners of Bureaus of Statistics of Labor. Since then these officials have met annually for the purpose of discussing statistical methods and the best way of collecting information and of tabulating, analyzing, and presenting it. It was one of the early dreams of the founders of this convention that some uniform contemporaneous work could be undertaken by all the bureaus in cooperation, but this dream was fraught with many difficulties. States did not organize their bureaus at the same time. Many of the subjects which had been covered by those organized at early dates formed the subjects of investigation of those which had been established at later dates, and hence there was a conflict; for the earlier bureaus did not

wish to cover again what was new and important to the more recently established ones. Another difficulty arose in the fact that the industries and conditions of one State were not common to all States having bureaus of statistics of labor. Notwithstanding the fact that the original idea has not been and can not be carried out, the convention has been of the greatest possible value to the different States. At each annual meeting each commissioner of labor reports the investigations he has in hand, the methods he has adopted for obtaining the information desired, and all the difficulties and complications attending his work. These matters are then discussed and the experience of older commissioners brought out for the benefit of those who have more recently come into the work of gathering statistics of labor. Thus great advantage is given to even the older commissioners to gain fresh inspiration from the troubles and difficulties of those who are new to the work. The convention also helps to call public attention not only to the value but to the methods of the work being conducted.

Notwithstanding all that I have said relative to the value and influence of the statistics of labor, I am perfectly well aware that they could be made of far greater value; but that greater value can be secured only through the direct action of the legislative bodies behind the bureaus. They are very poorly equipped. They need more men and more money. They need experience, which can come only through the influence of the executives of the States. With a longer tenure of office and an increase in the equipment and means of the bureaus, their future usefulness can be made to far excel that of the past and of the present. The lines of work which they can undertake are numerous and inexhaustible. Knowledge of production is absolutely essential for the adjustment of many of the difficult questions we are facing to-day, and any contribution, through statistical investigation or otherwise, that will enable both the capitalist and his employee to more clearly understand the real conditions of production should be welcomed by all elements of the community. The bureaus must be kept in the future, as in the past, free from partisanship. The statistician is not a statistician when he is an advocate, no matter how skillful he may be in the manipulation of figures. He must be impartial, he must make his investigations without any reference to theories to be proved or disproved, and give to the world the actual results of his inquiries. This country lacks trained statisticians. We have no means for training them except in the practical work of the statistical offices of the State and Federal governments. These offices, therefore, become a school for the future, and the statisticians of this country that are to be of great service to the governments must acquire their knowledge through the statistical offices; but no work can be accomplished successfully without money and without men. We must look, therefore, to the legislative branches of our various governments for the increase of the usefulness and for recognized influence of our bureaus of statistics of labor.

STRIKES AND LOCKOUTS IN THE UNITED STATES.

BY G. W. W. HANGER.

Very early in the history of the Federal Bureau of Labor consideration was given to that class of industrial disturbances known as strikes and lockouts, the Bureau's first collection of statistics relative to this subject forming the basis of its third annual report in 1887. Previous to that date no special effort had been made to secure adequate information on this subject covering the whole country, although a report had been prepared from data collected at the Tenth Census of the United States in 1880, which furnished information as to the number of strikes and lockouts during that year and their causes and results. It should be stated also that several of the State bureaus of labor, notably those of Massachusetts and Pennsylvania, had published more or less complete records of strikes and lockouts which had occurred within the limited area covered by their operations. The census report referred to shows that during the year 1880 the number of distinct disturbances of this character aggregated 762. A careful compilation of all available data relative to the strikes and lockouts which occurred previous to 1880 forms a part of the Third Annual Report of the Bureau of Labor and reveals the fact that prior to that year the total for the United States, so far as ascertainable, aggregated but 678, 51 of which occurred in 1879, 40 in 1878, 47 in 1877, 32 in 1876, etc.

While the period of strikes in the United States may be said to have begun in 1880, this method of enforcing demands on the part of workmen for the betterment of wage and other conditions of employment or for the abolishment of what were believed to be unjust conditions of employment, undoubtedly existed many years ago and under entirely different industrial conditions. In our own country isolated cases are known to have occurred as early as 1741. In that year there appears to have been a general strike of journeymen bakers (probably in New York City) who combined "not to bake bread but on certain terms." While similar cases may have occurred in the meantime, no further record is found of a difficulty of this character until the year 1796, when an association of journeymen shoemakers of Philadelphia ordered a strike or "turnout" of its members to enforce a demand for an increase of wages. This strike was successful, and in 1798 a similar strike was ordered by the same association, the result, like that of

its predecessor, being successful. In the following year the journey-men shoemakers struck against a demand by the master cordwainers of Philadelphia for a reduction of wages. The association of journey-men shoemakers is said to have numbered over 100 members at the time, and partial success was gained after a strike lasting ten weeks. Four years later, in 1803, a number of sailors in New York City, who had been receiving \$10 per month, struck for an increase in wages to \$14 per month. This strike was attended by considerable violence and resulted unsuccessfully. In the following years strikes gradually increased in number and importance, but the number which occurred annually did not assume important proportions until the year 1880, which may be termed the beginning of the strike period in the United States.

The investigation, the results of which were published in the Third Annual Report of the Bureau of Labor, in 1887, was undertaken for the purpose of supplying the growing demand of the public for accurate information as to the number and frequency of these disturbances, their causes and results, the numbers of employees involved, the wage loss, and the loss to employers entailed thereby, etc. The period covered by this first investigation included the years from 1881 to 1886. A second investigation by the Bureau in 1894 and a third in 1901 along similar lines bring the statistical record of strikes and lockouts down to the end of the year 1900, a period of twenty years. In these reports of the Bureau—the third, tenth, and sixteenth annuals—these disturbances are classified separately as to the number which were strikes and the number which were lockouts. The principal distinction between a strike and a lockout is that in one case the employees take the initiative in regard to the discontinuance of work in an establishment, and in the other case the initiative is taken by the employer. A strike may be defined as a refusal by the employees of an establishment to work unless the employer complies with some demand made by the former or withdraws some obnoxious demand made by himself; a lockout is defined as a refusal by the employer to allow his employees to work in his establishment unless they will comply with some demand as to the conditions of employment made by him. It is thus seen that but little difference exists between these two classes of industrial disturbances beyond the question of initiative, as indicated above. As compared with strikes, however, lockouts are relatively unimportant as regards both the number of persons affected and the financial losses involved. For this reason the facts relative to strikes only were used in the preparation of the graphic exhibit relating to these disturbances, which forms a portion of the exhibit of the Bureau at the Louisiana Purchase Exposition. As a basis for the consideration of the figures and charts which follow, as well as for the

purpose of affording a general survey of the main facts relative to strikes and lockouts, the following table is presented:

STRIKES AND LOCKOUTS IN THE UNITED STATES FROM 1881 TO 1900.

STRIKES.

Year.	Number of strikes.	Establishments involved.	Employees thrown out of work.	Average duration (days).	Wage loss of employees.	Assistance to employees by labor organizations.	Loss of employers.
1881.....	471	2,928	129,521	12.8	\$3,372,578	\$287,999	\$1,919,483
1882.....	454	2,105	154,671	21.9	9,864,228	734,339	4,269,094
1883.....	478	2,759	149,763	20.6	6,274,480	461,233	4,696,027
1884.....	443	2,367	147,054	30.5	7,566,717	407,871	3,398,073
1885.....	645	2,284	242,706	30.1	10,663,248	465,827	4,388,893
1886.....	1,432	10,053	508,044	23.4	14,992,453	1,122,130	12,357,808
1887.....	1,436	6,589	379,676	20.9	16,560,534	1,121,564	6,698,495
1888.....	906	3,506	147,704	20.3	6,377,749	1,762,668	6,509,017
1889.....	1,075	3,786	249,559	26.2	10,409,686	592,017	2,936,752
1890.....	1,833	9,424	351,944	24.2	13,875,338	910,285	6,135,404
1891.....	1,717	8,116	298,939	34.9	14,801,505	1,132,557	6,176,688
1892.....	1,298	5,540	206,671	23.4	10,772,622	833,874	5,145,691
1893.....	1,306	4,555	265,914	20.6	9,938,048	563,183	3,406,195
1894.....	1,349	8,196	660,425	32.4	37,145,532	931,062	18,982,129
1895.....	1,215	6,973	392,403	20.5	13,044,830	559,165	5,072,282
1896.....	1,026	5,462	241,170	22.0	11,098,207	462,165	5,304,235
1897.....	1,078	8,492	408,391	27.4	17,468,904	721,164	4,868,687
1898.....	1,066	3,809	249,002	22.5	10,037,284	585,228	4,596,462
1899.....	1,797	11,317	417,072	15.2	15,157,965	1,096,030	7,443,407
1900.....	1,779	9,248	506,066	23.1	18,341,670	1,434,452	9,431,299
Total...	22,793	117,509	6,105,694	23.8	257,863,478	16,174,793	122,731,121

* Not including the number in 33 establishments for which data were not obtainable.

LOCKOUTS.

Year.	Number of lockouts.	Establishments involved.	Employees thrown out of work.	Average duration (days).	Wage loss of employees.	Assistance to employees by labor organizations.	Loss of employers.
1881.....	6	9	655	32.2	\$18,519	\$3,150	\$6,960
1882.....	22	42	4,131	105.0	466,345	47,668	112,382
1883.....	28	117	20,512	57.5	1,069,212	102,253	297,097
1884.....	42	354	18,121	41.4	1,421,410	314,027	640,847
1885.....	50	183	15,424	27.1	901,173	89,488	455,477
1886.....	140	1,509	101,980	39.1	4,281,058	549,452	1,949,498
1887.....	67	1,281	59,630	49.8	4,233,700	155,846	2,819,736
1888.....	40	180	15,176	74.9	1,100,057	85,931	1,217,199
1889.....	36	132	10,731	57.5	1,379,722	115,389	307,125
1890.....	64	324	21,555	73.9	967,966	77,210	486,258
1891.....	69	546	31,014	37.8	883,709	50,195	616,888
1892.....	61	716	32,014	72.0	2,856,013	537,684	1,695,080
1893.....	70	305	21,842	34.7	6,659,401	364,268	1,034,420
1894.....	55	875	29,619	39.7	2,022,769	160,244	982,584
1895.....	40	370	14,785	31.6	791,703	67,701	584,155
1896.....	40	51	7,668	65.1	690,945	61,355	357,635
1897.....	32	171	7,763	38.6	583,606	47,326	298,044
1898.....	42	164	14,217	48.8	880,461	47,098	239,403
1899.....	41	323	14,817	37.5	1,485,174	126,957	379,865
1900.....	60	2,281	62,653	265.1	16,136,802	448,219	5,447,930
Total.	1,005	9,933	504,307	97.1	48,819,745	3,451,461	19,927,983

A comparison of the data for strikes with those for lockouts, as shown in this table, very clearly indicates the comparative unimportance of the latter class of disturbances. Following the totals it is seen that of the entire number of conflicts (23,798), which occurred

during the twenty years, 22,793, or 95.78 per cent, were initiated by the working people and were classified as strikes, while but 1,005, or 4.22 per cent, were initiated by employers and were classified as lockouts. A practically similar degree of disparity between the two classes of industrial disturbances is revealed when the figures relating to the establishments involved, the employees thrown out of work, etc., are compared. Of the 127,442 establishments involved in these conflicts during the period 117,509, or 92.21 per cent, were so involved by reason of strikes, while but 9,933, or 7.79 per cent, were involved on account of lockouts; of the 6,610,001 employees thrown out of work, 6,105,694, or 92.37 per cent, were deprived of employment by reason of strikes, and but 504,307, or 7.63 per cent, by reason of lockouts; of the enormous wage loss of the employees thrown out of work, amounting to \$306,683,223, \$257,863,478, or 84.08 per cent, was chargeable against strikes, while \$48,819,745, or 15.92 per cent was due to lockouts. In comparing the amount of financial assistance rendered by labor organizations to employees engaged in these conflicts, practically the same proportion is found as for the loss in wages, \$16,174,793, or 82.41 per cent of the total assistance rendered (\$19,626,254), being furnished to striking employees and \$3,451,461, or 17.59 per cent, to employees locked out. The total financial loss to employers during the twenty-year period by reason of these conflicts was \$142,659,104, of which amount \$122,731,121, or 86.03 per cent, were losses resulting from strikes, and \$19,927,983, or 13.97 per cent, from lockouts.

Having briefly compared the data relating to these two classes of conflicts, no further consideration will be given to lockouts, as the facts relating thereto were not considered of sufficient importance to warrant the preparation of a separate series of charts, even had space been available for their display in the exhibit of the Bureau. Full information relating to lockouts as well as strikes during the twenty years ending December 31, 1900, may be found in the last report of the Bureau relating to this subject—the Sixteenth Annual.

The following three tables have been specially prepared as the basis for a portion of the charts forming the exhibit. The first two show by years and by industries the number of strikes, establishments involved, and employees thrown out of work, classified as to whether the strike was ordered or not ordered by labor organizations. The third table shows by States the number of strikes ordered and not ordered by labor organizations and the total establishments involved and employees thrown out of work.

STRIKES AND LOCKOUTS IN THE UNITED STATES. 1101

STRIKES, ESTABLISHMENTS INVOLVED, AND EMPLOYEES THROWN OUT OF WORK, AS ORDERED BY LABOR ORGANIZATIONS AND NOT SO ORDERED, BY YEARS, 1881 TO 1900.

[This table does not include 10 strikes, involving 104 establishments and throwing out of work 7,594 persons, as it was not possible to ascertain whether ordered by labor organizations or not.]

Year.	Strikes.			Establishments involved in strikes.			Employees thrown out of work by strikes.		
	Ordered by labor organizations.	Not ordered by labor organizations.	Total.	Ordered by labor organizations.	Not ordered by labor organizations.	Total.	Ordered by labor organizations.	Not ordered by labor organizations.	Total.
1881.....	222	249	471	2,213	715	2,928	72,052	57,469	129,521
1882.....	218	236	454	1,600	505	2,105	100,192	54,479	154,671
1883.....	271	207	478	2,317	442	2,759	97,843	51,920	149,763
1884.....	239	204	443	1,961	406	2,367	87,944	59,110	147,054
1885.....	361	284	645	1,620	664	2,284	159,667	83,038	242,705
1886.....	760	672	1,432	8,819	1,234	10,053	381,983	126,061	508,044
1887.....	952	483	1,435	5,746	842	6,588	279,728	99,944	379,672
1888.....	616	288	904	3,064	440	3,504	108,153	39,403	147,556
1889.....	724	351	1,075	3,019	767	3,786	192,580	56,979	249,559
1890.....	1,306	525	1,831	8,534	888	9,422	264,142	87,560	351,702
1891.....	1,284	432	1,716	7,379	642	8,021	226,437	65,502	291,939
1892.....	918	380	1,298	5,050	490	5,540	159,342	47,329	206,671
1893.....	906	399	1,305	4,005	550	4,555	201,035	64,879	265,914
1894.....	847	501	1,348	7,271	924	8,195	649,610	110,725	760,335
1895.....	658	555	1,213	6,100	871	6,971	270,699	121,619	392,318
1896.....	662	363	1,025	4,913	548	5,461	174,025	67,120	241,145
1897.....	596	482	1,078	7,798	694	8,492	301,286	107,106	408,391
1898.....	638	418	1,056	3,220	589	3,809	172,067	76,935	249,002
1899.....	1,115	682	1,797	10,439	878	11,317	295,492	121,580	417,072
1900.....	1,164	615	1,779	8,422	826	9,248	407,094	97,972	505,066
Total.....	14,457	8,326	22,783	103,490	13,915	117,405	4,501,370	1,596,730	6,098,100

STRIKES, ESTABLISHMENTS INVOLVED, AND EMPLOYEES THROWN OUT OF WORK, AS ORDERED BY LABOR ORGANIZATIONS AND NOT SO ORDERED, BY INDUSTRIES, 1881 TO 1900.

[This table does not include 10 strikes, involving 104 establishments and throwing out of work 7,594 persons, as it was not possible to ascertain whether ordered by labor organizations or not.]

Industry.	Strikes.			Establishments involved in strikes.			Employees thrown out of work by strikes.		
	Ordered by labor organizations.	Not ordered by labor organizations.	Total.	Ordered by labor organizations.	Not ordered by labor organizations.	Total.	Ordered by labor organizations.	Not ordered by labor organizations.	Total.
Boots and shoes.....	639	223	862	1,015	249	1,264	118,282	18,985	137,267
Building trades.....	3,989	451	4,440	40,922	988	41,910	636,007	23,939	660,946
Clothing.....	1,365	273	1,638	19,012	683	19,695	529,354	34,18	563,772
Coal and coke.....	1,303	1,209	2,512	11,586	2,892	14,478	1,428,747	463,688	1,892,435
Cotton and woollen goods.....	211	922	1,133	489	1,088	1,577	163,804	205,234	369,038
Food preparations.....	308	100	408	4,910	216	5,126	86,853	23,392	110,245
Furniture.....	333	72	405	1,023	85	1,108	41,95	8,706	49,901
Glass.....	198	186	374	346	253	599	55,498	33,653	89,151
Machines and machinery.....	300	152	452	1,006	167	1,173	72,052	17,443	89,495
Metals and metallic goods.....	1,055	1,024	2,079	3,436	1,215	4,651	309,388	201,948	511,336
Printing and publishing.....	657	108	765	1,585	138	1,723	35,233	5,055	40,288
Public ways and works construction.....	105	503	608	231	660	891	11,554	91,345	102,899
Stone quarrying and cutting.....	612	244	856	3,178	405	3,583	87,763	22,760	110,523
Tobacco.....	1,102	407	1,509	5,302	851	6,153	166,331	84,765	251,096
Transportation.....	564	708	1,272	2,248	1,185	3,433	393,245	91,209	484,454
Woolen goods.....	227	67	294	949	107	1,056	48,203	5,156	53,359
All other industries.....	1,509	1,677	3,186	6,252	2,733	8,985	317,861	259,034	576,895
Total.....	14,457	8,326	22,783	103,490	13,915	117,405	4,501,370	1,596,730	6,098,100

STRIKES ORDERED BY LABOR ORGANIZATIONS AND NOT SO ORDERED, ESTABLISHMENTS INVOLVED, AND EMPLOYEES THROWN OUT OF WORK, BY STATES, 1881 TO 1900.

[The number of strikes shown in this table does not include 10 strikes, involving 104 establishments and throwing out of work 7,594 persons, as it was not possible to ascertain whether ordered by labor organizations or not; the establishments involved and employees thrown out of work are for all strikes.]

State.	Strikes.			Establishments involved.	Employees thrown out of work.
	Ordered by labor organizations.	Not ordered by labor organizations.	Total.		
Alabama	117	93	210	494	53,609
California	224	117	341	948	42,097
Colorado	125	88	213	840	49,774
Connecticut	209	377	586	1,021	53,996
Florida	90	141	231	855	62,599
Georgia	126	64	190	578	30,448
Illinois	1,950	690	2,640	20,784	850,599
Indiana	313	239	552	1,964	132,344
Iowa	177	174	351	1,408	72,598
Kentucky	138	85	223	895	50,849
Maine	87	85	172	254	33,961
Maryland	146	94	240	1,049	59,590
Massachusetts	976	729	1,705	5,099	345,470
Michigan	213	131	344	1,174	91,364
Minnesota	243	138	381	1,633	69,110
Missouri	277	129	406	8,516	107,526
New Hampshire	50	78	128	190	24,877
New Jersey	442	363	805	8,209	150,123
New York	5,065	1,375	6,460	37,845	1,193,361
Ohio	918	653	1,571	5,712	415,651
Pennsylvania	1,306	1,537	2,843	18,438	1,666,043
Rhode Island	47	152	199	409	45,615
Tennessee	144	92	236	652	51,251
Texas	104	40	144	574	19,941
Virginia	72	43	115	249	24,258
West Virginia	75	104	179	764	93,583
Wisconsin	323	231	554	2,568	99,642
All other States	480	284	764	4,387	212,415
Total	14,457	8,326	22,783	117,509	6,105,694

From these tables there were constructed the following charts, reproductions of which are given opposite pages 1102 and 1104:

Chart 1.—Strikes, establishments involved, and employees thrown out of work, as ordered by labor organizations and not so ordered, by years, 1881 to 1900.

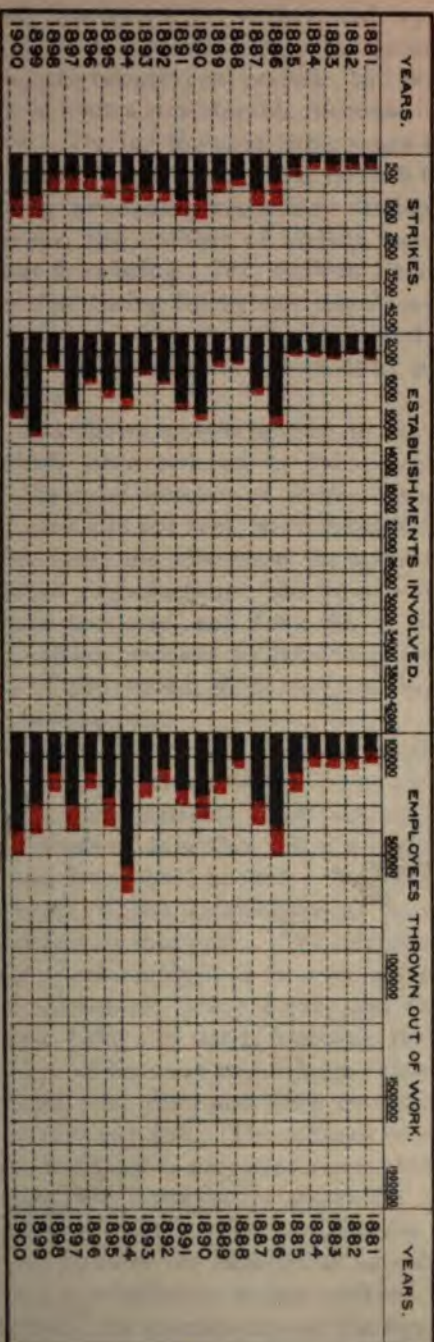
Chart 2.—Strikes, establishments involved, and employees thrown out of work, as ordered by labor organizations and not so ordered, by industries, 1881 to 1900.

Chart 3.—Strikes ordered by labor organizations and not so ordered, establishments involved, and employees thrown out of work, by States, 1881 to 1900.

Taking up the consideration of Chart 1 and the figures upon which it has been based, it is seen that the total number of strikes which occurred during the twenty-year period beginning with 1881 was 22,783, not including 10 strikes which were omitted from this total, owing to lack of information as to whether they were ordered by labor organizations or not so ordered. The number of strikes during each year of the period is very clearly brought out by this chart. Beginning in 1881 with 471, the number of strikes during the next three years remained under 500. In 1885 the number increased to 645, while in 1886 it more than doubled, being 1,432 for that year. Practically the same number of strikes occurred in 1887 as in 1886, but in 1888 a considerable decrease is shown, the number for that year being 904.

STRIKES, ESTABLISHMENTS INVOLVED, AND EMPLOYEES THROWN OUT OF WORK, AS ORDERED BY LABOR ORGANIZATIONS AND NOT SO ORDERED, 1881 TO 1900.

BY YEARS.



Black bars - Strikes Ordered by Labor Organizations. Red bars - Strikes not Ordered by Labor Organizations.

In 1889 the number increased to 1,075, while in 1890 the number almost doubled, reaching 1,831 strikes, and, by reference to the chart, 1890 is seen to be the year in which the greatest number of strikes occurred during the twenty-year period. In 1891 the number decreased to 1,716, while in 1892 a considerable decrease is noted, the exact number being 1,298. During the next three years no considerable change occurred in the number of strikes, but in 1896 the number dropped to 1,025, remaining practically stationary during the next two years. In 1899, however, the number of strikes increased enormously, the number for that year being 1,797, while in 1900 the number was 1,779. It is thus seen that during the twenty years covered by the figures and charts the greatest number of strikes occurred during 1890 and 1891, and during 1899 and 1900 the two periods of greatest prosperity and industrial activity.

This chart also shows with reference to the number of strikes the proportion which were ordered by labor organizations and not so ordered. Of the total number of strikes which occurred during the period, 14,457, or 63.46 per cent, were ordered by labor organizations. The years 1890, 1891, and 1892 show the largest proportion of strikes ordered by labor organizations, the figures being: 1891, 74.83 per cent; 1890, 71.33 per cent, and 1892, 70.72 per cent. The smallest proportion of strikes ordered by labor organizations was during the first two years of the period, 47.13 per cent being so ordered in 1881 and 48.02 per cent in 1882.

The table shows that during the period 117,405 establishments were involved in the 22,783 strikes which form the basis for the chart. Beginning with a comparatively small number in 1881, the number of establishments involved in strikes did not reach 3,000 during any one of the five years from 1881 to 1885. In 1886, however, the number almost quadrupled, 10,053 establishments being involved in strikes which occurred during that year. The number during the next three years decreased considerably, but in 1890 rose to 9,422. The number in 1891 again decreased, being 8,021, and this decrease continued during 1892 and 1893. In 1894, however, the number of establishments involved in strikes was much larger than during the preceding year, being 8,195. In 1895 and 1896 the number again decreased, while in 1897 it rose to 8,492. The number of establishments involved in 1898 was smaller than in any year since 1889, being 3,809. In the succeeding year, 1899, however, is shown the greatest number in any year of the period, 11,317, while in 1900 the number involved was 9,248. The chart shows the number of establishments involved separated according to whether in strikes ordered by labor organizations or not so ordered. An examination of the figures in the chart shows that in each year of the period without exception the number of establishments involved in strikes ordered by labor organizations was very

largely in excess of those involved in strikes not so ordered. Of the total number of establishments involved in strikes during the period, 103,490, or 88.15 per cent, were involved in strikes ordered by labor organizations, while 13,915, or 11.85 per cent, were involved in strikes not so ordered.

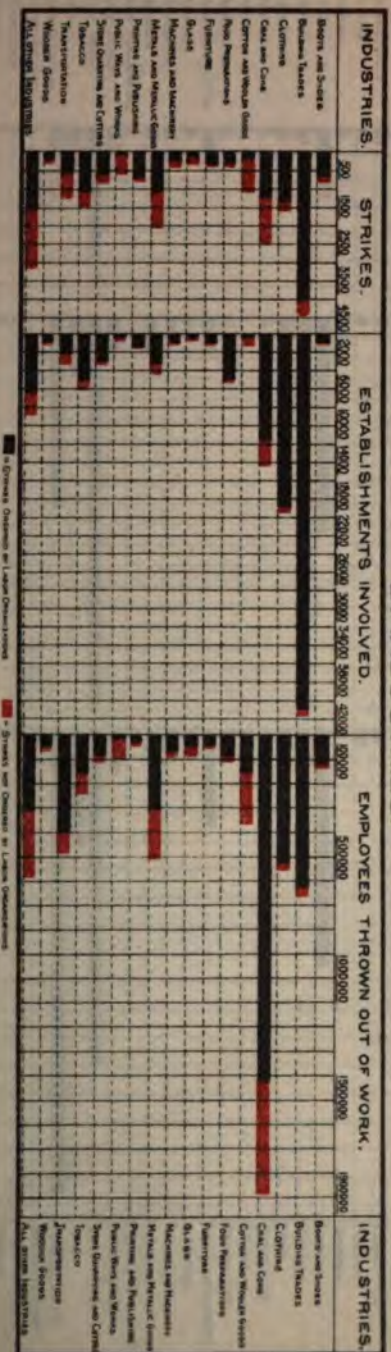
This chart also shows the number of employees thrown out of work during each year of the period on account of the 22,783 strikes, the total number for the period being 6,098,100, of which 4,501,370, or 73.82 per cent, were thrown out by reason of strikes ordered by labor organizations, while 1,596,730, or 26.18 per cent, were thrown out by strikes not so ordered. It is seen that the greatest number of employees thrown out of work was for the year 1894, the number being 660,335. In 1886 the number was 508,044, while in 1900 the number was 505,066, etc.

Chart 2 shows the 22,783 strikes which occurred during the period, classified according to the industries affected. The number of establishments involved and the number of employees thrown out of work by reason of these strikes are also shown for each industry. Reference to the chart and the figures upon which it is based shows that the industries most affected by strikes during the period of twenty years were the building trades, with 4,440 strikes; the coal and coke industry, with 2,512; the metal and metallic goods industry, with 2,079; the clothing industry, with 1,638; the tobacco industry, with 1,509, and transportation, with 1,262. Of the 22,783 strikes forming the basis of the table, 58.99 per cent were in the six industries just referred to. Of the establishments involved in these strikes by far the greatest number, 41,910, were in the building trades; the next largest number, 19,695, were in the clothing industry, and the next, 14,478, in the coal and coke industry. As regards the number of employees thrown out of work on account of these strikes, however, it is seen that much the largest number were in the coal and coke industry, 1,892,435 being thrown out of work in this industry alone. In the building trades 665,946 were thrown out of work on account of strikes during the period, while the number thrown out in the clothing industry was 563,772, in the metal and metallic goods industry 511,336, and in the transportation industry 484,454, etc.

Chart 3 is quite similar in form to the two preceding charts, showing the number of strikes, establishments involved, and employees thrown out of work during the period, classified by the States in which the strikes occurred. In this table, also, the strikes ordered by labor organizations and not so ordered have been indicated. This separation, however, was not extended to the establishments involved and the employees thrown out of work. During the twenty-year period covered, it is seen that by far the largest number of strikes, 6,460, or 28.35 per cent, occurred in the State of New York, while 2,843, or 12.48 per

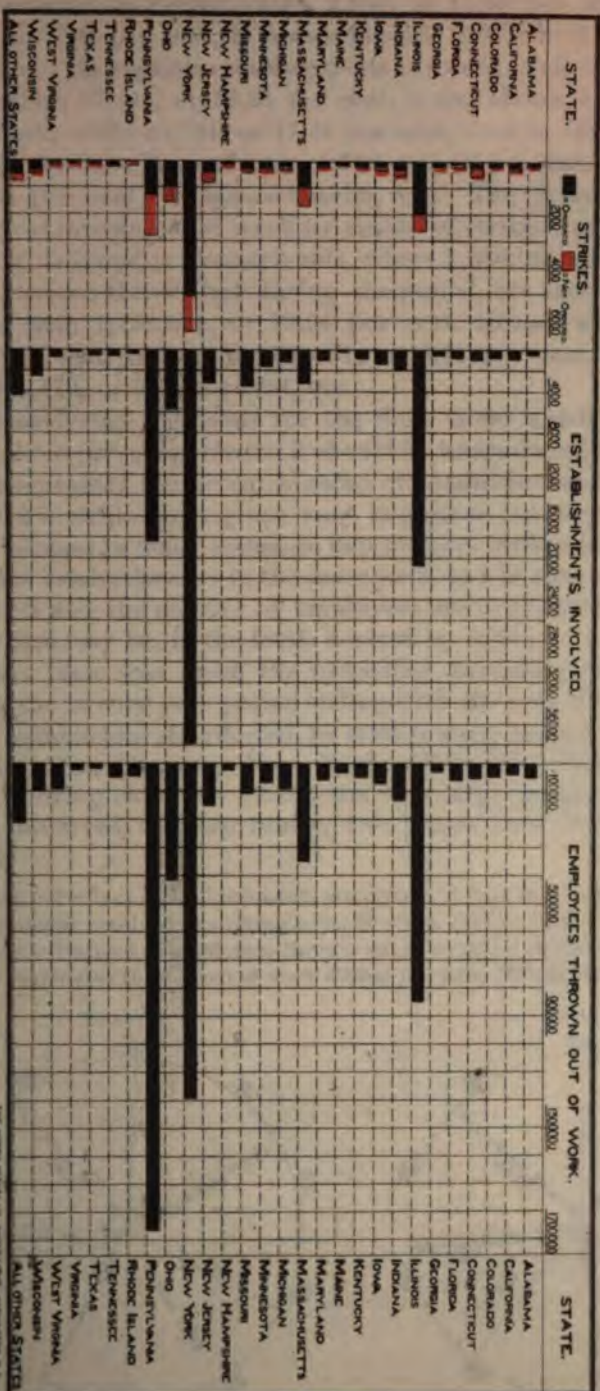
STRIKES, ESTABLISHMENTS INVOLVED, AND EMPLOYEES THROWN OUT OF WORK, AS ORDERED BY LABOR ORGANIZATIONS AND NOT SO ORDERED, 1881 TO 1900.

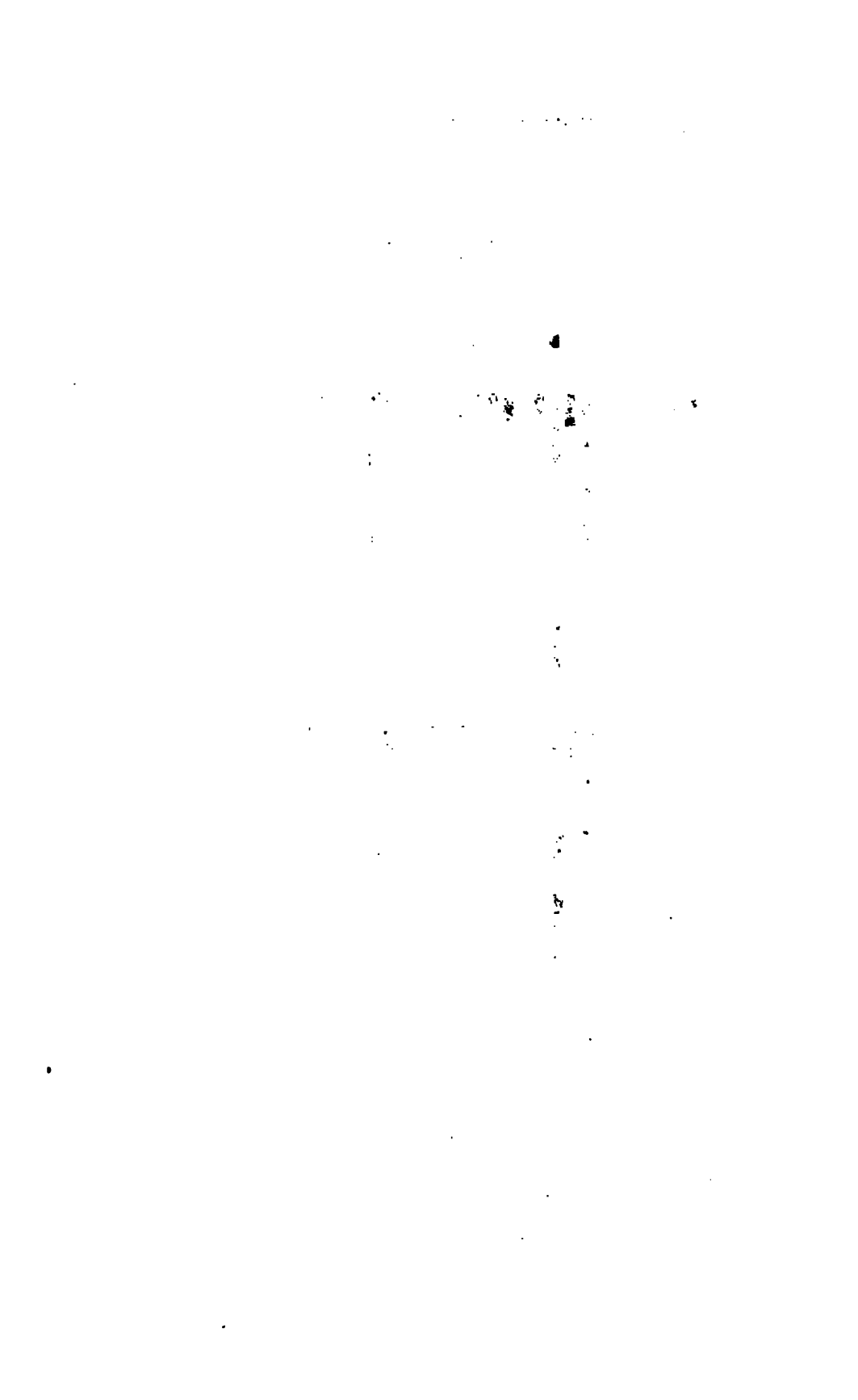
BY INDUSTRIES.



Black bar = Strikes Ordered by Labor Organizations. Red bar = Strikes not Ordered by Labor Organizations.

STRIKES ORDERED BY LABOR ORGANIZATIONS AND NOT SO ORDERED, ESTABLISHMENTS INVOLVED, AND EMPLOYEES THROWN OUT OF WORK, BY STATES, 1881 TO 1900.





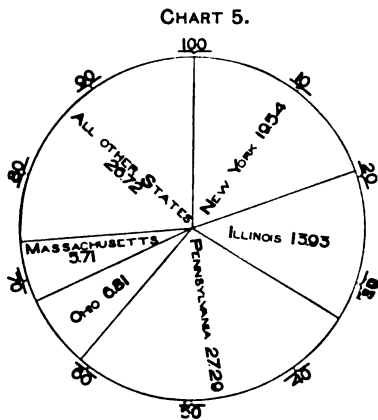
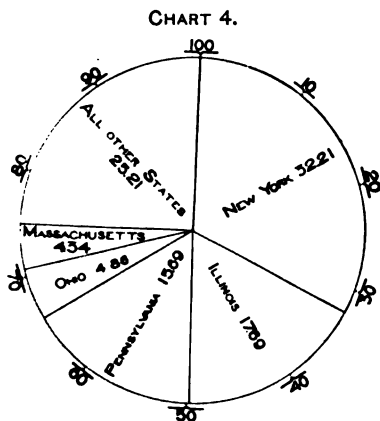
cent, occurred in Pennsylvania, 2,640, or 11.59 per cent, in Illinois, 1,705, or 7.48 per cent, in Massachusetts, 1,571, or 6.90 per cent, in Ohio, etc. As regards establishments involved in all strikes, the largest number, 37,845, or 32.21 per cent, is also shown for the State of New York, while 20,784, or 17.69 per cent, were in Illinois, 18,438, or 15.69 per cent, in Pennsylvania, 5,712, or 4.86 per cent, in Ohio, 5,099, or 4.34 per cent, in Massachusetts, etc. The greatest number of employees thrown out of work by reason of strikes during the period, however, is found in Pennsylvania, where 1,666,043, or 27.29 per cent of all persons thrown out during the period, are shown. New York follows with 1,193,361, or 19.54 per cent, Illinois with 850,599, or 13.93 per cent, Ohio with 415,651, or 6.81 per cent, Massachusetts with 348,470, or 5.71 per cent, etc.

In considering the totals for the three tables which form the basis of the three preceding charts, it should be remembered that the figures do not represent the actual number of establishments or individuals involved in strikes in a given year, in a given industry, or in a given State, because in many instances two or more strikes have occurred in the same establishments in the same year, and in such cases the establishments and the number of employees are duplicated or triplicated, as the case may be, in the totals derived by addition.

It has been seen from the preceding discussion of Chart 3 that during the twenty-year period ending with the year 1900 the majority of all establishments affected by strikes were located in five States, Illinois, Massachusetts, New York, Ohio, and Pennsylvania. In order to bring out more clearly the very large proportion of strikes which occurred in these States, two charts have been prepared, as follows:

Chart 4.—Per cent of establishments involved in strikes in 5 leading States of total establishments involved in strikes during 20 years, 1881 to 1900.

Chart 5.—Per cent of employees thrown out of work by strikes in 5 leading States of total employees thrown out of work during 20 years, 1881 to 1900.



The following table furnishes the figures which form the basis of these charts:

ESTABLISHMENTS INVOLVED AND EMPLOYEES THROWN OUT OF WORK IN STRIKES IN
5 LEADING STATES, 1881 TO 1900.

State.	Establishments involved in strikes.		Employees thrown out of work.	
	Number.	Per cent of total.	Number.	Per cent of total.
New York.....	37,845	32.21	1,193,361	19.54
Illinois.....	20,784	17.69	850,599	13.93
Pennsylvania.....	18,438	15.69	1,666,043	27.29
Ohio.....	5,712	4.86	415,651	6.81
Massachusetts.....	5,099	4.34	848,470	5.71
All other States.....	29,681	25.21	1,631,570	26.72
Total.....	117,509	100.00	6,105,694	100.00

Chart 4 shows that of the total number of establishments involved in strikes during the period, 74.79 per cent were located in the States of New York, Illinois, Pennsylvania, Ohio, and Massachusetts, while but 25.21 per cent were located in the other States of the Union. Chart 5, which is similar in form, shows that of the total number of employees thrown out of work by reason of strikes in the United States during the twenty-year period, 73.28 per cent were thrown out of work by strikes which occurred in establishments located in these five States, while but 26.72 per cent were thrown out of work by strikes in establishments located in the other States. It is interesting to note that these States contained 45.05 per cent of all the manufacturing establishments and employed 55.09 per cent of the capital invested in the manufacturing and mechanical industries of the United States, according to the reports of the Twelfth Census.

The distribution of strikes by principal cities during the twenty-year period is shown in the following table:

ESTABLISHMENTS INVOLVED AND EMPLOYEES THROWN OUT OF WORK IN STRIKES IN
5 LEADING CITIES AND IN 15 OTHER CITIES, 1881 TO 1900.

City.	Establishments involved in strikes.		Employees thrown out of work.	
	Number.	Per cent of total.	Number.	Per cent of total.
New York.....	33,161	28.22	962,470	15.76
Chicago.....	17,176	14.62	598,000	9.71
Allegheny and Pittsburg.....	5,432	4.62	175,795	2.88
Philadelphia.....	5,045	4.29	197,538	3.24
Fifteen other cities.....	15,150	12.89	562,706	9.22
All other localities.....	41,545	35.36	3,614,186	59.19
Total.....	117,509	100.00	6,105,694	100.00

The table immediately preceding forms the basis of the following charts:

Chart 6.—Per cent of establishments involved in strikes in 20 leading cities of total establishments involved in strikes during 20 years, 1881 to 1900.

Chart 7.—Per cent of employees thrown out of work by strikes in 20 leading cities of total employees thrown out of work during 20 years, 1881 to 1900.

CHART 6.

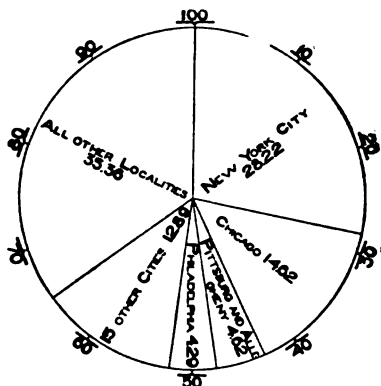
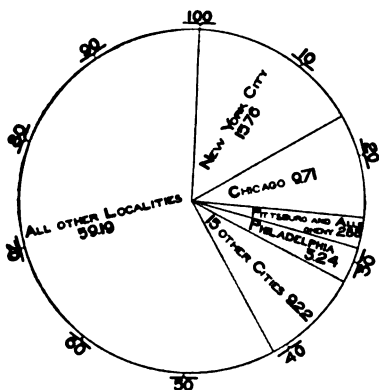


CHART 7.



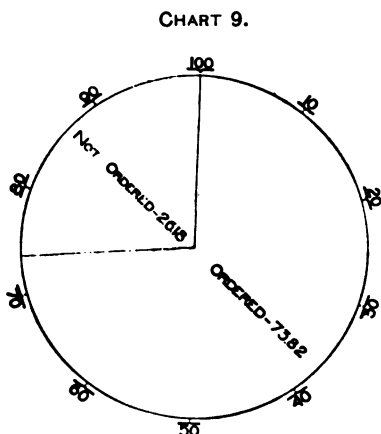
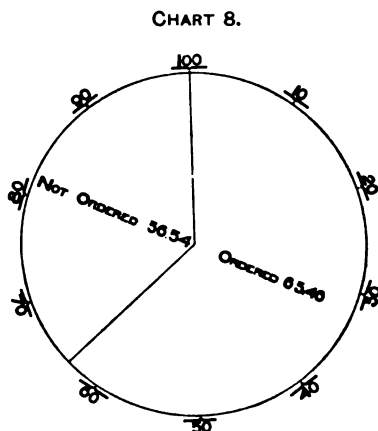
Out of the total of 22,793 strikes which occurred in the United States during the twenty-year period 10,723, or 47.05, per cent, occurred in 20 cities and 7,942, or 34.84 per cent, in the five cities, New York, Chicago, Allegheny, Pittsburg, and Philadelphia. Of the establishments involved in these strikes, as shown by the chart, 28.22 per cent were in strikes in New York City; 14.62 per cent in strikes in Chicago; 4.62 per cent in strikes in Allegheny and Pittsburg; 4.29 per cent in strikes in Philadelphia, and 12.89 per cent in strikes in 15 other cities. It is thus seen that 64.64 per cent of establishments involved in strikes in the United States during the period were located in 20 cities, while but 35.36 per cent were located in the rest of the country. Likewise it is seen that of the total number of employees thrown out of work by strikes during the period, 15.76 per cent were thrown out of work by strikes in New York City; 9.71 per cent by strikes in Chicago; 2.88 per cent by strikes in Allegheny and Pittsburg; 3.24 per cent by strikes in Philadelphia, and 9.22 per cent by strikes in 15 other cities. Of the total number of employees thrown out of work by strikes, 40.81 per cent were thrown out of work by strikes in the 20 cities, while 59.19 per cent were thrown out of work by strikes in the remainder of the country. Further investigation shows that the wage loss to employees through strikes in the 20 cities was \$76,637,571 as against \$257,863,478 for the entire country; the loss to employers was \$56,058,702 as against \$122,731,121; and the assistance to employees by labor organizations was \$8,537,350 as against \$16,174,793. The proportion of the total wage loss in these cities was, therefore, 29.72 per cent, while that of the employers' losses was 45.68 per cent. The

assistance rendered strikers in these cities was 52.78 per cent of the total amount of assistance rendered to strikers in the entire country. These 20 cities contained 25.32 per cent of all the manufacturing establishments in the country, and employed 35.47 per cent of the capital invested in the manufacturing and mechanical industries of the United States, according to the reports of the Twelfth Census.

In certain previous charts the data relative to strikes have been classified according to whether they referred to strikes ordered by labor organizations or not so ordered. The following charts have been constructed for the purpose of summarizing the most important facts relating to the strikes, establishments involved, and employees thrown out of work, as ordered and not ordered by labor organizations:

Chart 8.—Per cent of strikes ordered by labor organizations and not so ordered during 20 years, 1881 to 1900.

Chart 9.—Per cent of employees thrown out of work by strikes ordered by labor organizations and not so ordered during 20 years, 1881 to 1900.



These charts show that of the total number of strikes which occurred during the twenty-year period, 63.46 per cent were ordered by labor organizations and 36.54 per cent were not so ordered, and of the total number of employees thrown out of work by strikes during the 20-year period, 73.82 per cent were thrown out of work by strikes ordered by labor organizations and 26.18 per cent by strikes not so ordered.

Of the total number of establishments involved in strikes, 88.15 per cent were in strikes ordered by labor organizations while 11.85 per cent were in strikes not so ordered. It is interesting to note that quite a large proportion of the establishments involved in strikes during the period were compelled to cease work temporarily on this account. Of the total number of establishments involved in strikes during the period, 65.73 per cent were closed on account of strikes

while 34.27 per cent were not closed. The following charts have been constructed to bring out these facts:

Chart 10.—Per cent of establishments involved in strikes ordered by labor organizations and not so ordered during 20 years, 1881 to 1900.

Chart 11.—Per cent of establishments closed on account of strikes of total establishments involved in strikes during 20 years, 1881 to 1900.

CHART 10.

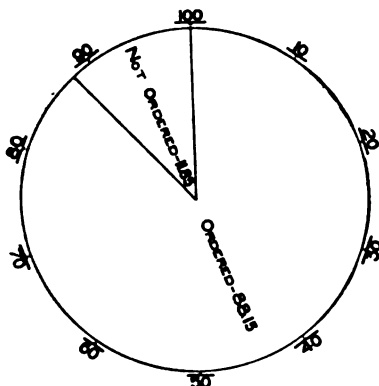
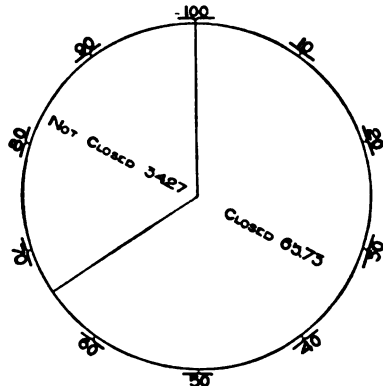


CHART 11.



The following three tables furnishing data respectively by years, by industries, and by States relative to the wage loss of employees, and the loss to employers on account of strikes, and the assistance rendered to the employees by labor organizations, form the basis for an interesting series of charts:

WAGE LOSS OF EMPLOYEES, ASSISTANCE TO EMPLOYEES BY LABOR ORGANIZATIONS, AND EMPLOYERS' LOSS IN STRIKES, BY YEARS, 1881 TO 1900.

Year.	Wage loss of employees.	Assistance to employees by labor organizations.	Employers' loss.
1881.....	\$3,372,578	\$287,999	\$1,919,483
1882.....	9,864,228	734,339	4,269,094
1883.....	6,274,480	461,233	4,696,027
1884.....	7,666,717	407,871	3,393,073
1885.....	10,663,248	465,827	4,348,893
1886.....	14,992,453	1,122,130	12,357,808
1887.....	16,560,534	1,121,551	6,698,495
1888.....	6,377,749	1,752,668	6,509,017
1889.....	10,409,686	592,017	2,936,752
1890.....	13,875,338	910,285	5,135,404
1891.....	14,801,505	1,132,557	6,176,688
1892.....	10,772,622	833,874	5,145,691
1893.....	9,938,048	563,183	3,406,195
1894.....	37,146,532	931,052	18,982,129
1895.....	13,044,830	559,165	5,072,232
1896.....	11,098,207	462,165	5,304,235
1897.....	17,468,904	721,164	4,868,687
1898.....	10,037,284	585,228	4,506,462
1899.....	15,157,965	1,096,030	7,443,407
1900.....	18,341,570	1,434,452	9,431,289
Total.....	257,863,478	16,174,793	122,731,121

**WAGE LOSS OF EMPLOYEES, ASSISTANCE TO EMPLOYEES BY LABOR ORGANIZATIONS,
AND EMPLOYERS' LOSS IN STRIKES, BY INDUSTRIES, 1881 TO 1900.**

Industry.	Wage loss of employees.	Assistance to employees by labor organizations.	Employers' loss.
Boots and shoes	\$7,669,062	\$598,881	\$3,321,637
Building trades	20,452,292	1,808,483	9,613,624
Clothing	10,424,709	534,228	3,121,604
Coal and coke	106,503,470	2,393,107	30,870,466
Cotton and woolen goods	12,798,427	412,457	4,820,058
Food preparations	2,239,476	76,919	1,541,239
Furniture	1,996,587	259,254	1,051,009
Glass	7,492,419	1,033,940	2,144,136
Machines and machinery	3,929,672	611,484	3,673,825
Metals and metallic goods	29,929,510	2,108,318	10,941,990
Printing and publishing	1,829,183	530,236	1,511,026
Public ways and works	842,941	28,401	296,339
Stone quarrying and cutting	6,840,849	562,261	2,678,616
Tobacco	7,517,709	1,610,440	2,840,112
Transportation	13,517,259	2,038,757	27,531,256
Wooden goods	1,814,344	167,407	2,500,982
All other industries	22,065,569	1,400,220	14,273,202
Total	257,863,478	16,174,793	122,731,121

**WAGE LOSS OF EMPLOYEES, ASSISTANCE TO EMPLOYEES BY LABOR ORGANIZATIONS,
AND EMPLOYERS' LOSS IN STRIKES, BY STATES, 1881 TO 1900.**

State.	Wage loss of employees.	Assistance to employees by labor organizations.	Employers' loss.
Alabama	\$3,394,600	\$60,247	\$821,298
California	2,422,112	264,556	1,607,532
Colorado	4,960,913	150,026	4,198,270
Connecticut	1,546,245	171,285	1,043,344
Florida	2,511,798	449,768	1,007,476
Georgia	973,557	69,738	681,304
Illinois	32,390,065	3,053,273	26,652,943
Indiana	7,044,635	275,992	2,483,821
Iowa	2,891,489	95,091	1,266,110
Kentucky	3,992,370	171,026	1,254,815
Maine	1,426,906	77,210	369,784
Maryland	3,023,636	160,180	1,377,287
Massachusetts	15,459,873	1,244,778	6,571,484
Michigan	3,728,540	259,359	1,626,000
Minnesota	1,532,280	71,927	1,693,870
Missouri	4,811,386	380,416	6,055,139
New Hampshire	520,235	23,507	125,243
New Jersey	6,389,023	612,832	2,530,424
New York	30,998,325	3,069,239	16,044,601
Ohio	15,963,320	853,995	7,572,758
Pennsylvania	84,123,837	3,229,181	24,236,204
Rhode Island	1,684,258	81,969	942,865
Tennessee	4,459,977	242,699	1,576,920
Texas	1,074,373	50,510	1,003,910
Virginia	472,767	30,436	273,695
West Virginia	6,230,505	210,130	1,498,490
Wisconsin	3,576,872	347,879	3,058,567
All other States	10,266,081	467,544	5,156,967
Total	257,863,478	16,174,793	122,731,121

From these tables there were constructed the following charts, reproductions of which are given herewith.

Chart 12.—Wage loss of employees, assistance to employees by labor organizations, and employers' loss in strikes, by years, 1881 to 1900.

Chart 13.—Wage loss of employees, assistance to employees by labor organizations, and employers' loss in strikes, by industries, 1881 to 1900.

Chart 14.—Wage loss of employees, assistance to employees by labor organizations, and employers' loss in strikes, by States, 1881 to 1900

WAGE LOSS OF EMPLOYEES ASSISTANCE TO EMPLOYEES BY LABOR ORGANIZATIONS,
AND EMPLOYERS' LOSS IN STRIKES, 1881 TO 1900 [IN MILLIONS OF DOLLARS].

BY YEARS.

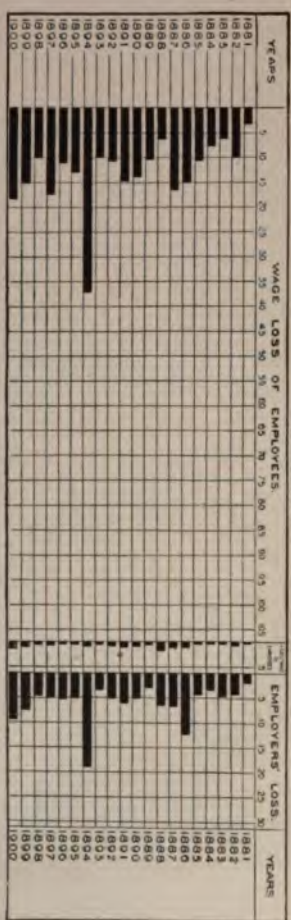


CHART 12

BY INDUSTRIES.

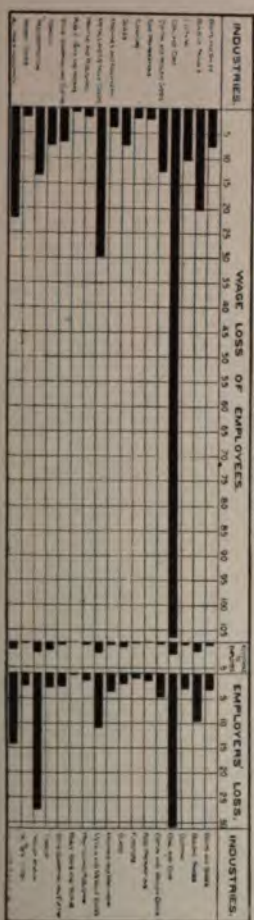
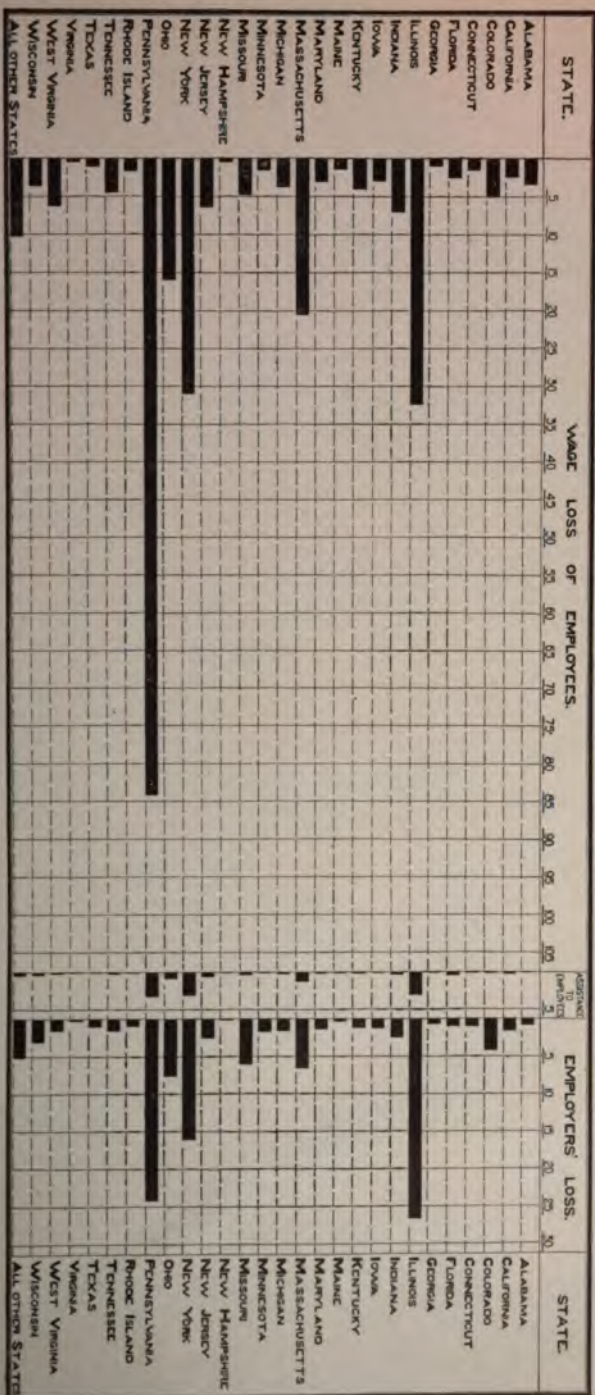


CHART 13

WAGE LOSS OF EMPLOYEES, ASSISTANCE TO EMPLOYEES BY LABOR ORGANIZATIONS, AND EMPLOYERS' LOSS IN STRIKES, BY STATES, 1881 TO 1900 (IN MILLIONS OF DOLLARS).



These three charts involve some of the most important features of the statistics of strikes—the losses of employees and employers as the result of industrial disturbances of this character. It should be kept in mind, however, in considering these figures, that they represent the immediate, and in many instances only temporary, losses. The computation of wage losses was of necessity based solely on the number of employees thrown out of work, their average wages, and the number of working days which elapsed before they were reemployed by their former employers or elsewhere. In many industries, however, the working days per year average somewhat less than the possible three hundred and thirteen days, owing to seasons of entire or partial cessation of work, while many causes, such as sickness, voluntary lay-offs, etc., operate to prevent employees from working full time even when the opportunity is offered. These facts could not of course be considered in the computation of losses either to employees or to employers, although it is often found that a strike in a particular establishment is followed by a period of unusual activity, during which both the employees and the employer make up a portion and sometimes all of the time lost on account of the strike.

Bearing in mind, therefore, the fact that a certain proportion of these losses are but temporary, attention is directed first to the table and chart showing the figures for losses on account of strikes, and assistance rendered to strikers, arranged by years. It is shown that the entire wage loss for the twenty-year period by reason of strikes amounted to the enormous sum of \$257,863,478, making an average wage loss of \$42 to every employee involved in strikes during the period. The figures for lockouts, as ascertained by the Bureau, indicate a much greater loss per employee on account of the latter class of disturbances, the average loss being \$97 to each employee involved. The greatest wage loss to employees on account of strikes in any one year was in 1894, when it amounted to \$37,145,532—a loss more than double that in any other year of the period. The entire amount of assistance rendered employees on strike by their labor organizations during the twenty-year period was \$16,174,793—a sum representing but 6.27 per cent of the total wage loss incurred. The loss to employers during the period on account of strikes is shown to have been \$122,731,121. If the number of establishments involved in strikes during the twenty-year period be considered in this connection it is seen that the average loss per establishment was \$1,044. These losses were due in a large measure to the inability of employers to fill contracts by reason of the cessation of production and on account of the property losses entailed during strikes. The greatest firm loss in any year (\$18,982,129) is shown for 1894, which was also the year of greatest wage loss on account of strikes.

The distribution by industries of losses to employees and employers,

and assistance to employees, is clearly shown by Chart 13 and the table upon which it is based. It is seen that of the total wage loss of employees (\$257,863,478) during the twenty-year period, \$106,503,470, or 41.30 per cent, was incurred by workmen in the coal and coke industry; \$29,929,510, or 11.61 per cent, by those in the metal and metallic goods industry; \$20,452,292, or 7.93 per cent, by those in the building trades; \$13,517,259, or 5.24 per cent, by those in the transportation industry; \$12,798,427, or 4.96 per cent, by those in the cotton and woolen goods industry, etc. The total wage losses incurred by employees in the five above-mentioned classifications amounted to \$183,200,958, or 71.04 per cent of the entire wage losses during the period. Likewise, the greatest losses to employers on account of strikes were in these five industries, the figures being \$30,870,466, or 25.15 per cent of the total loss to employers during the period, in the coal and coke industry; \$27,531,256, or 22.43 per cent, in the transportation industry; \$10,941,990, or 8.92 per cent, in the metal and metallic goods industry; \$9,613,624, or 7.83 per cent, in the building trades; and \$4,820,058, or 3.93 per cent, in the cotton and woolen goods industry. The total of the employers' losses in the five classifications amounted to \$83,777,394, or 68.26 per cent of the entire loss to employers during the period.

Chart 14, showing in a similar manner the distribution of losses and assistance, by States, also presents features of great interest. The table on which this chart was based shows that of the total wage loss (\$257,863,478) during the period \$84,123,837, or 32.62 per cent, was incurred by employees involved in strikes in the State of Pennsylvania; \$32,390,065, or 12.56 per cent, in Illinois; \$30,993,325, or 12.02 per cent, in New York; \$15,963,320, or 6.19 per cent, in Ohio; \$15,459,873, or 6 per cent, in Massachusetts, etc. It is thus seen that the total wage losses incurred by employees on strike in the States of Pennsylvania, Illinois, New York, Ohio, and Massachusetts amounted to \$178,930,420, or 69.39 per cent of the entire loss to employees during the period. The greatest financial assistance to employees on strike was also rendered by their labor organizations in these States, the total amount, \$11,450,466, being 70.79 per cent of the amount of \$16,174,793 representing the aggregate of the assistance rendered strikers in the entire country during the period. Likewise the loss to employers in these States formed a large proportion of the total loss to employers throughout the country during the twenty years. Of the entire loss to employers (\$122,731,121), \$26,652,943, or 21.72 per cent, was incurred by employers in the State of Illinois; \$24,236,204, or 19.75 per cent, by those in Pennsylvania; \$16,044,601, or 13.07 per cent, by those in New York; \$7,572,758, or 6.17 per cent, by those in Ohio, and \$6,571,484, or 5.35 per cent, by those in Massachusetts. The total loss to employers in the five States mentioned amounted to \$81,077,990,

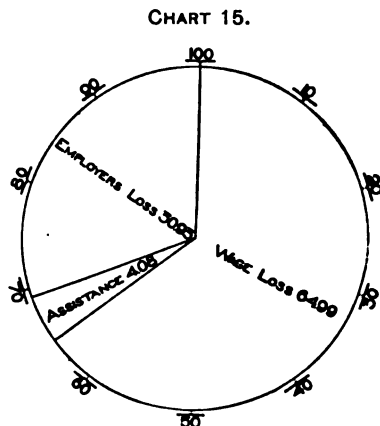
0.06 per cent of the entire loss in the United States during the year.

The distribution of losses and assistance in the twenty cities principally affected by strikes has already been shown.

The proportion which the three items of employees' loss, employers' loss, and assistance to employees bear to each other is well shown in the following chart:

FIG. 15.—Per cent of wage loss of employees, assistance to employees by labor organizations, and employers' loss in strikes during 20 years, 1881 to 1900.

The total amount shown for these three items (\$396,769,392), \$257,863, or 64.99 per cent, represents the total loss of employees on account of strikes during the twenty-year period; \$74,793, or 4.08 per cent, the assistance rendered to employees by labor organizations, and \$122,731,121, or 31.93 per cent, the loss of employ-



The following five tables, furnished on the basis of the final series of data relating to this subject:

TABLES OF STRIKES ORDERED BY LABOR ORGANIZATIONS AND NOT SO ORDERED, BY YEARS, 1881 TO 1900.

This table does not include results for 37 establishments where strikes were still pending, etc., and for strikes involving 104 establishments for which information was not obtainable as to whether they were ordered or not ordered by labor organizations.]

Year.	Number of strikes ordered by labor organizations.	Per cent of establishments in which strikes ordered by labor organization—			Number of strikes not ordered by labor organizations.	Per cent of establishments in which strikes not ordered by labor organizations—		
		Succeeded.	Succeeded partly.	Failed.		Succeeded.	Succeeded partly.	Failed.
.....	222	65.61	6.46	27.93	249	48.25	8.67	43.08
.....	218	56.38	9.56	34.06	236	44.75	3.76	51.49
.....	271	64.26	18.39	17.85	207	26.25	4.07	69.68
.....	239	55.79	3.26	40.96	204	30.79	6.90	62.31
.....	361	63.70	10.50	25.80	284	26.20	7.08	66.72
.....	760	33.49	20.46	46.05	672	41.65	7.38	50.97
.....	952	48.38	7.19	44.43	483	26.96	7.24	65.80
.....	616	56.17	4.99	38.84	288	25.00	8.86	66.14
.....	724	45.61	21.37	33.02	351	49.93	9.26	40.81
.....	1,306	53.99	10.17	35.84	525	39.86	8.45	51.69
.....	1,284	38.46	8.10	53.44	432	36.76	11.68	51.56
.....	918	39.33	8.75	51.92	390	39.19	8.16	52.65
.....	906	53.94	10.89	35.17	399	28.42	6.19	65.39
.....	817	37.35	13.67	48.98	501	43.94	12.12	43.94
.....	638	59.25	10.05	30.70	555	27.21	9.18	63.61
.....	662	62.47	6.55	30.98	363	29.93	15.69	54.38
.....	596	59.67	29.51	10.82	482	30.83	12.54	56.63
.....	638	69.72	6.15	24.13	418	33.96	7.64	58.40
.....	1,115	76.33	14.19	9.48	682	36.56	14.92	48.52
.....	1,164	48.06	21.95	29.99	615	29.94	7.03	63.03
Total	14,457	52.86	13.60	33.54	8,326	35.56	9.06	55.39

RESULTS OF STRIKES ORDERED BY LABOR ORGANIZATIONS AND NOT SO ORDERED, BY INDUSTRIES, 1881 TO 1900.

[This table does not include results for 37 establishments where strikes were still pending, etc., and for 10 strikes involving 104 establishments, for which information was not obtainable as to whether ordered or not ordered by labor organizations.]

Industry.	Number of strikes ordered by labor organizations.	Per cent of establishments in which strikes ordered by labor organizations—			Number of strikes not ordered by labor organizations.	Per cent of establishments in which strikes not ordered by labor organizations—		
		Succeeded.	Succeeded partly.	Failed.		Succeeded.	Succeeded partly.	Failed.
Boots and shoes.....	639	40.89	9.56	49.85	223	34.54	4.82	60.64
Building trades.....	3,989	55.24	13.18	31.58	451	52.23	9.21	38.6
Clothing.....	1,365	74.02	7.83	18.15	273	55.20	4.83	39.97
Coal and coke.....	1,303	18.54	33.59	47.87	1,209	38.44	10.23	56.33
Cotton and woolen goods.....	211	21.97	18.28	59.75	922	23.99	11.67	64.34
Food preparations.....	308	66.68	1.77	31.55	100	39.35	3.70	56.95
Furniture.....	333	35.09	10.75	54.16	72	14.12	7.06	78.82
Glass.....	188	46.22	8.72	45.06	186	19.76	5.64	74.70
Machines and machinery.....	300	57.95	10.64	31.41	152	25.15	10.78	64.07
Metals and metallic goods.....	1,055	51.78	10.22	38.00	1,024	28.09	9.97	61.94
Printing and publishing.....	657	42.39	10.08	47.58	108	29.71	2.17	68.12
Public works and works.....	106	60.17	13.85	25.98	503	35.30	11.82	52.88
Stone quarrying and cutting.....	612	52.38	19.28	28.44	244	51.85	6.17	41.98
Tobacco.....	1,102	41.93	6.11	51.96	407	60.52	11.04	28.44
Transportation.....	554	54.07	10.86	35.07	708	32.66	9.70	57.64
Wooden goods.....	227	36.88	2.85	60.27	67	14.95	.....	85.05
All other industries.....	1,509	47.08	16.41	36.51	1,677	29.58	7.98	62.44
Total.....	14,457	52.86	13.60	33.54	8,326	35.56	9.05	55.39

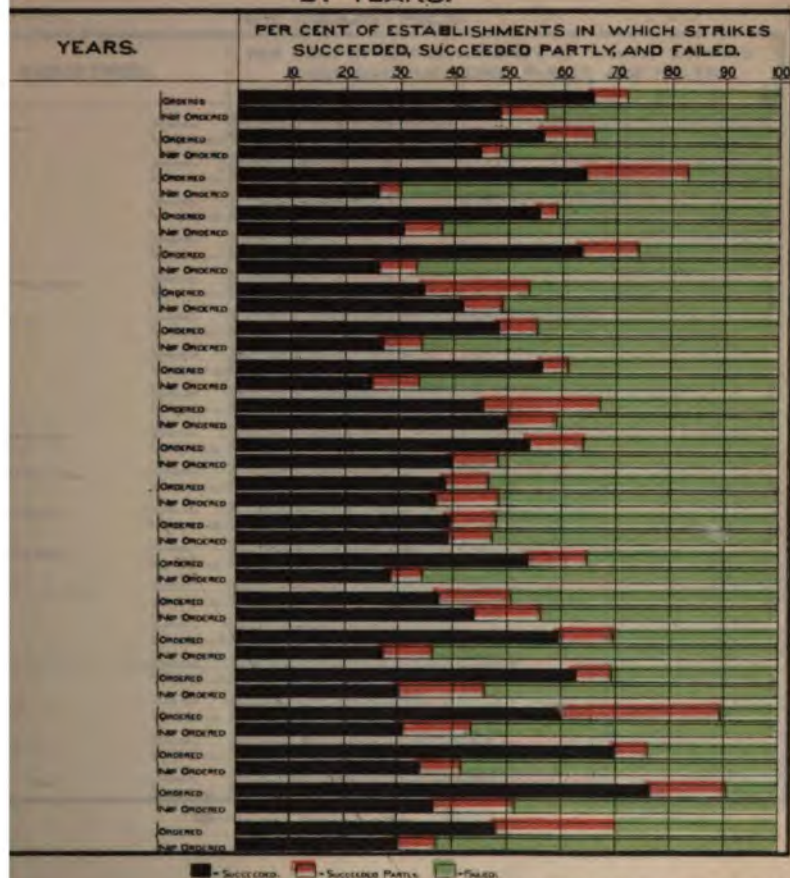
RESULTS OF STRIKES, BY STATES, 1881 TO 1900.

[This table does not include results for 37 establishments in which strikes were still pending, etc.]

State.	Strikes.	Establishments in which strikes—				Per cent of establishments in which strikes—		
		Succeeded.	Succeeded partly.	Failed.	Total.	Succeeded.	Succeeded partly.	Failed.
Alabama.....	210	110	56	328	494	22.27	11.33	66.40
California.....	341	347	57	543	947	36.64	6.02	57.34
Colorado.....	213	227	101	505	833	27.25	12.13	60.62
Connecticut.....	586	389	73	559	1,021	38.10	7.15	54.75
Florida.....	231	423	226	206	855	49.48	26.43	24.09
Georgia.....	190	71	95	412	578	12.28	16.44	71.28
Illinois.....	2,640	11,643	1,733	7,407	20,783	56.02	8.34	35.64
Indiana.....	552	504	536	924	1,964	25.65	27.29	47.05
Iowa.....	351	451	125	832	1,408	32.03	8.88	59.09
Kentucky.....	223	447	145	302	894	50.00	16.22	33.78
Maine.....	172	71	88	145	254	27.95	14.96	57.09
Maryland.....	242	514	179	356	1,049	49.00	17.06	33.94
Massachusetts.....	1,705	2,163	1,003	1,929	5,095	42.45	19.69	37.86
Michigan.....	344	495	141	538	1,174	42.16	12.01	45.83
Minnesota.....	383	875	218	540	1,633	53.58	13.35	33.07
Missouri.....	406	1,243	612	1,661	3,516	35.35	17.41	47.24
New Hampshire.....	128	48	32	110	190	25.26	16.84	57.90
New Jersey.....	805	1,274	775	1,160	3,209	39.70	24.15	36.15
New York.....	6,460	25,869	2,658	9,302	37,829	68.38	7.03	24.59
Ohio.....	1,571	2,017	1,089	2,602	5,708	35.34	19.08	45.58
Pennsylvania.....	2,846	7,066	4,254	7,118	18,438	38.32	23.07	38.61
Rhode Island.....	199	118	41	250	409	28.85	10.02	61.13
Tennessee.....	236	170	75	407	652	25.08	11.50	62.42
Texas.....	144	347	77	150	574	60.45	13.42	26.13
Virginia.....	115	107	35	107	249	42.97	14.06	42.97
West Virginia.....	180	175	163	423	761	23.00	21.42	55.58
Wisconsin.....	556	986	309	1,273	2,568	38.40	12.03	49.57
All other States.....	764	1,488	479	2,420	4,387	33.92	10.92	55.16
Total.....	22,793	59,638	15,325	42,509	117,472	50.77	13.04	36.19

RESULTS OF STRIKES ORDERED BY LABOR ORGANIZATIONS, AND NOT SO ORDERED, 1881 TO 1900.

BY YEARS.

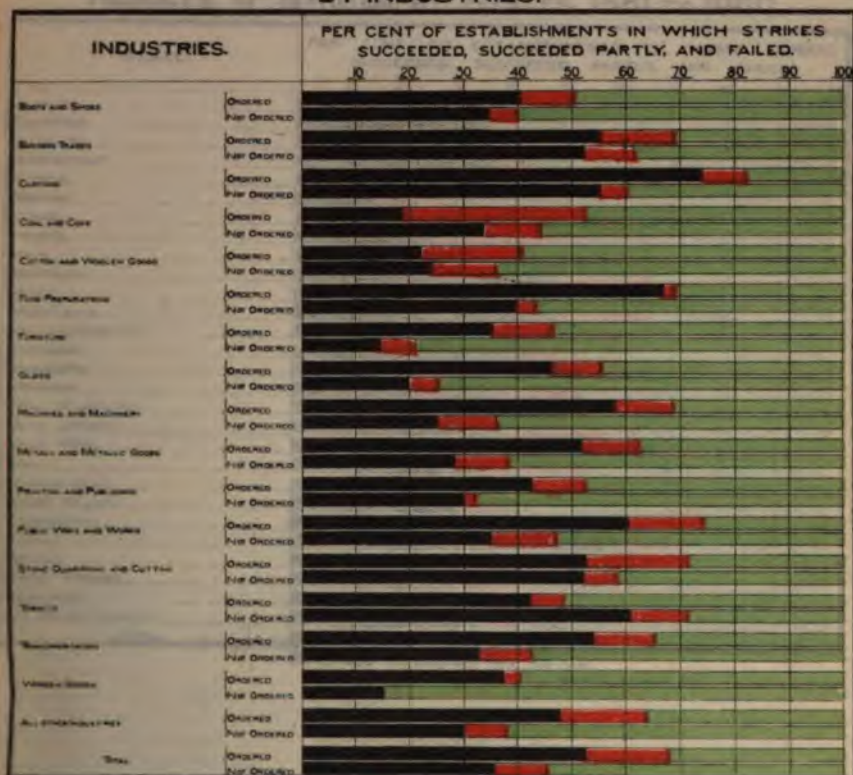


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RESULTS OF STRIKES ORDERED BY LABOR ORGANIZATIONS, AND NOT SO ORDERED, 1881 TO 1900.

BY INDUSTRIES.

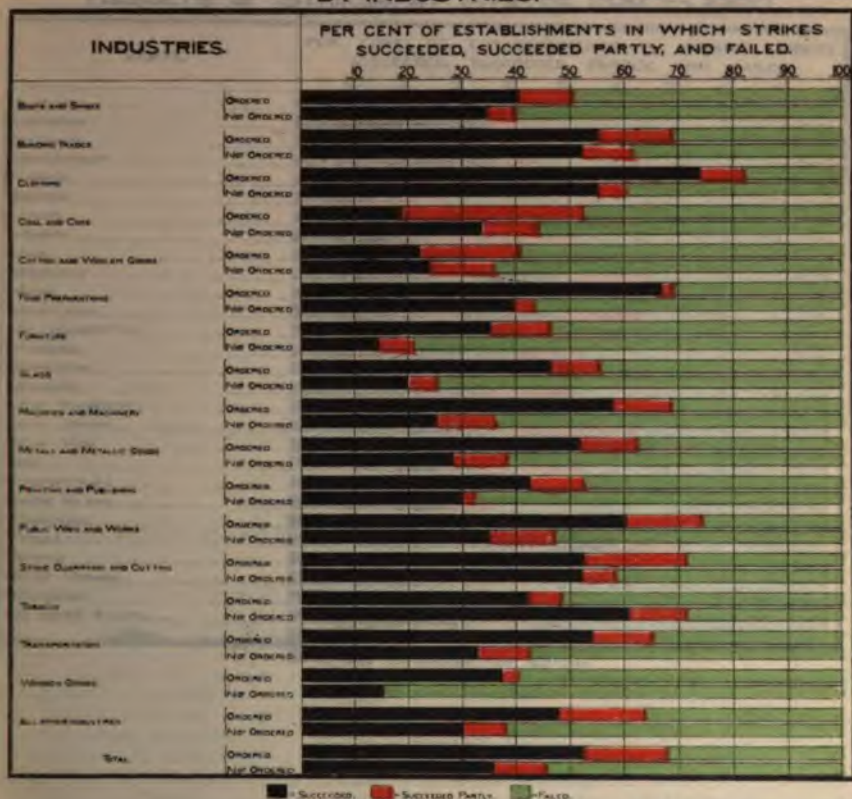


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1. *Introduction*
 2. *Methodology*
 3. *Results*
 4. *Discussion*
 5. *Conclusion*
 6. *References*
 7. *Appendix*
 8. *Tables*
 9. *Figures*
 10. *Supplementary Materials*
 11. *Notes*
 12. *References*
 13. *Appendix*
 14. *Tables*
 15. *Figures*
 16. *Supplementary Materials*
 17. *Notes*
 18. *References*
 19. *Appendix*
 20. *Tables*
 21. *Figures*
 22. *Supplementary Materials*
 23. *Notes*
 24. *References*
 25. *Appendix*
 26. *Tables*
 27. *Figures*
 28. *Supplementary Materials*
 29. *Notes*
 30. *References*
 31. *Appendix*
 32. *Tables*
 33. *Figures*
 34. *Supplementary Materials*
 35. *Notes*
 36. *References*
 37. *Appendix*
 38. *Tables*
 39. *Figures*
 40. *Supplementary Materials*
 41. *Notes*
 42. *References*
 43. *Appendix*
 44. *Tables*
 45. *Figures*
 46. *Supplementary Materials*
 47. *Notes*
 48. *References*
 49. *Appendix*
 50. *Tables*
 51. *Figures*
 52. *Supplementary Materials*
 53. *Notes*
 54. *References*
 55. *Appendix*
 56. *Tables*
 57. *Figures*
 58. *Supplementary Materials*
 59. *Notes*
 60. *References*
 61. *Appendix*
 62. *Tables*
 63. *Figures*
 64. *Supplementary Materials*
 65. *Notes*
 66. *References*
 67. *Appendix*
 68. *Tables*
 69. *Figures*
 70. *Supplementary Materials*
 71. *Notes*
 72. *References*
 73. *Appendix*
 74. *Tables*
 75. *Figures*
 76. *Supplementary Materials*
 77. *Notes*
 78. *References*
 79. *Appendix*
 80. *Tables*
 81. *Figures*
 82. *Supplementary Materials*
 83. *Notes*
 84. *References*
 85. *Appendix*
 86. *Tables*
 87. *Figures*
 88. *Supplementary Materials*
 89. *Notes*
 90. *References*
 91. *Appendix*
 92. *Tables*
 93. *Figures*
 94. *Supplementary Materials*
 95. *Notes*
 96. *References*
 97. *Appendix*
 98. *Tables*
 99. *Figures*
 100. *Supplementary Materials*
 101. *Notes*
 102. *References*
 103. *Appendix*
 104. *Tables*
 105. *Figures*
 106. *Supplementary Materials*
 107. *Notes*
 108. *References*
 109. *Appendix*
 110. *Tables*
 111. *Figures*
 112. *Supplementary Materials*
 113. *Notes*
 114. *References*
 115. *Appendix*
 116. *Tables*
 117. *Figures*
 118. *Supplementary Materials*
 119. *Notes*
 120. *References*
 121. *Appendix*
 122. *Tables*
 123. *Figures*
 124. *Supplementary Materials*
 125. *Notes*
 126. *References*
 127. *Appendix*
 128. *Tables*
 129. *Figures*
 130. *Supplementary Materials*
 131. *Notes*
 132. *References*
 133. *Appendix*
 134. *Tables*
 135. *Figures*
 136. *Supplementary Materials*
 137. *Notes*
 138. *References*
 139. *Appendix*
 140. *Tables*
 141. *Figures*
 142. *Supplementary Materials*
 143. *Notes*
 144. *References*
 145. *Appendix*
 146. *Tables*
 147. *Figures*
 148. *Supplementary Materials*
 149. *Notes*
 150. *References*
 151. *Appendix*
 152. *Tables*
 153. *Figures*
 154. *Supplementary Materials*
 155. *Notes*
 156. *References*
 157. *Appendix*
 158. *Tables*
 159. *Figures*
 160. *Supplementary Materials*
 161. *Notes*
 162. *References*
 163. *Appendix*
 164. *Tables*
 165. *Figures*
 166. *Supplementary Materials*
 167. *Notes*
 168. *References*
 169. *Appendix*
 170. *Tables*
 171. *Figures*
 172. *Supplementary Materials*
 173. *Notes*
 174. *References*
 175. *Appendix*
 176. *Tables*
 177. *Figures*
 178. *Supplementary Materials*
 179. *Notes*
 180. *References*
 181. *Appendix*
 182. *Tables*
 183. *Figures*
 184. *Supplementary Materials*
 185. *Notes*
 186. *References*
 187. *Appendix*
 188. *Tables*
 189. *Figures*
 190. *Supplementary Materials*
 191. *Notes*
 192. *References*
 193. *Appendix*
 194. *Tables*
 195. *Figures*
 196. *Supplementary Materials*
 197. *Notes*
 198. *References*
 199. *Appendix*
 200. *Tables*
 201. *Figures*
 202. *Supplementary Materials*
 203. *Notes*
 204. *References*
 205. *Appendix*
 206. *Tables*
 207. *Figures*
 208. *Supplementary Materials*
 209. *Notes*
 210. *References*
 211. *Appendix*
 212. *Tables*
 213. *Figures*
 214. *Supplementary Materials*
 215. *Notes*
 216. *References*
 217. *Appendix*
 218. *Tables*
 219. *Figures*
 220. *Supplementary Materials*
 221. *Notes*
 222. *References*
 223. *Appendix*
 224. *Tables*
 225. *Figures*
 226. *Supplementary Materials*
 227. *Notes*
 228. *References*
 229. *Appendix*
 230. *Tables*
 231. *Figures*
 232. *Supplementary Materials*
 233. *Notes*
 234. *References*
 235. *Appendix*
 236. *Tables*
 237. *Figures*
 238. *Supplementary Materials*
 239. *Notes*
 240. *References*
 241. *Appendix*
 242. *Tables*
 243. *Figures*
 244. *Supplementary Materials*
 245. *Notes*
 246. *References*
 247. *Appendix*
 248. *Tables*
 249. *Figures*
 250. *Supplementary Materials*
 251. *Notes*
 252. *References*
 25

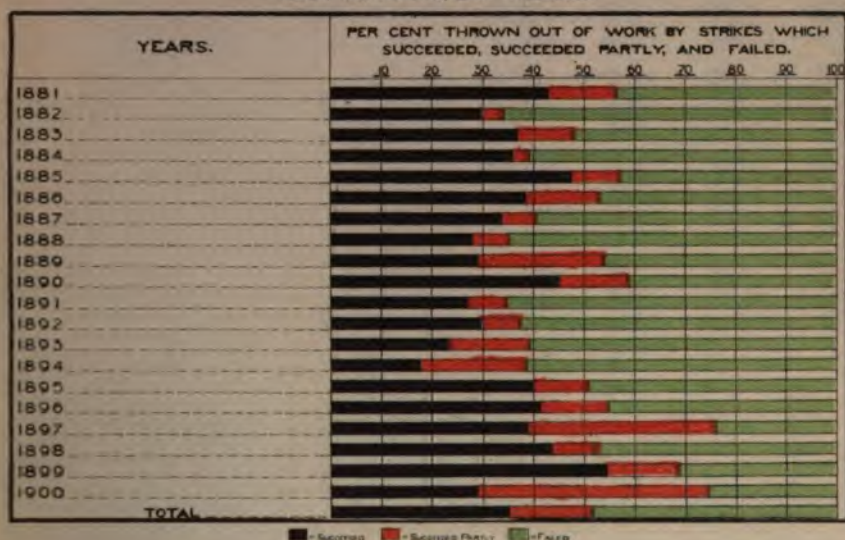
RESULTS OF STRIKES ORDERED BY LABOR ORGANIZATIONS, AND NOT SO ORDERED, 1881 TO 1900.

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RESULTS OF STRIKES TO EMPLOYEES THROWN OUT OF WORK, 1881 TO 1900, BY YEARS.



RESULTS OF STRIKES UNDERTAKEN FOR FIVE LEADING CAUSES, 1881 TO 1900.



[illegible]

the 1990s, the number of people in the world who are under 15 years of age is expected to increase from 1.1 billion to 1.5 billion. The number of people aged 65 and over is expected to increase from 200 million to 400 million. The number of people aged 15 and over is expected to increase from 3.5 billion to 4.5 billion. The number of people aged 15 and over is expected to increase from 3.5 billion to 4.5 billion. The number of people aged 15 and over is expected to increase from 3.5 billion to 4.5 billion.

the 1990s, the number of people in the United States who are 65 years of age or older has increased by 50 percent, and the number of people 75 years of age or older has increased by 100 percent. The number of people 85 years of age or older has increased by 200 percent. The number of people 90 years of age or older has increased by 400 percent. The number of people 95 years of age or older has increased by 800 percent. The number of people 100 years of age or older has increased by 1,600 percent. The number of people 105 years of age or older has increased by 3,200 percent. The number of people 110 years of age or older has increased by 6,400 percent. The number of people 115 years of age or older has increased by 12,800 percent. The number of people 120 years of age or older has increased by 25,600 percent. The number of people 125 years of age or older has increased by 51,200 percent. The number of people 130 years of age or older has increased by 102,400 percent. The number of people 135 years of age or older has increased by 204,800 percent. The number of people 140 years of age or older has increased by 409,600 percent. The number of people 145 years of age or older has increased by 819,200 percent. The number of people 150 years of age or older has increased by 1,638,400 percent. The number of people 155 years of age or older has increased by 3,276,800 percent. The number of people 160 years of age or older has increased by 6,553,600 percent. The number of people 165 years of age or older has increased by 13,107,200 percent. The number of people 170 years of age or older has increased by 26,214,400 percent. The number of people 175 years of age or older has increased by 52,428,800 percent. The number of people 180 years of age or older has increased by 104,857,600 percent. The number of people 185 years of age or older has increased by 209,715,200 percent. The number of people 190 years of age or older has increased by 419,430,400 percent. The number of people 195 years of age or older has increased by 838,860,800 percent. The number of people 200 years of age or older has increased by 1,677,721,600 percent. The number of people 205 years of age or older has increased by 3,355,443,200 percent. The number of people 210 years of age or older has increased by 6,710,886,400 percent. The number of people 215 years of age or older has increased by 13,421,772,800 percent. The number of people 220 years of age or older has increased by 26,843,545,600 percent. The number of people 225 years of age or older has increased by 53,687,091,200 percent. The number of people 230 years of age or older has increased by 107,374,182,400 percent. The number of people 235 years of age or older has increased by 214,748,364,800 percent. The number of people 240 years of age or older has increased by 429,496,729,600 percent. The number of people 245 years of age or older has increased by 858,993,459,200 percent. The number of people 250 years of age or older has increased by 1,717,986,918,400 percent. The number of people 255 years of age or older has increased by 3,435,973,836,800 percent. The number of people 260 years of age or older has increased by 6,871,947,673,600 percent. The number of people 265 years of age or older has increased by 13,743,895,347,200 percent. The number of people 270 years of age or older has increased by 27,487,790,694,400 percent. The number of people 275 years of age or older has increased by 54,975,581,388,800 percent. The number of people 280 years of age or older has increased by 109,951,162,777,600 percent. The number of people 285 years of age or older has increased by 219,902,325,555,200 percent. The number of people 290 years of age or older has increased by 439,804,651,110,400 percent. The number of people 295 years of age or older has increased by 879,609,302,220,800 percent. The number of people 300 years of age or older has increased by 1,759,218,604,441,600 percent. The number of people 305 years of age or older has increased by 3,518,437,208,883,200 percent. The number of people 310 years of age or older has increased by 7,036,874,417,766,400 percent. The number of people 315 years of age or older has increased by 14,073,748,835,532,800 percent. The number of people 320 years of age or older has increased by 28,147,497,671,065,600 percent. The number of people 325 years of age or older has increased by 56,294,995,342,131,200 percent. The number of people 330 years of age or older has increased by 112,589,990,684,262,400 percent. The number of people 335 years of age or older has increased by 225,179,981,368,524,800 percent. The number of people 340 years of age or older has increased by 450,359,962,737,049,600 percent. The number of people 345 years of age or older has increased by 900,719,925,474,099,200 percent. The number of people 350 years of age or older has increased by 1,801,439,850,948,198,400 percent. The number of people 355 years of age or older has increased by 3,602,879,701,896,396,800 percent. The number of people 360 years of age or older has increased by 7,205,759,403,792,793,600 percent. The number of people 365 years of age or older has increased by 14,411,518,807,585,587,200 percent. The number of people 370 years of age or older has increased by 28,823,037,615,171,174,400 percent. The number of people 375 years of age or older has increased by 57,646,075,230,342,348,800 percent. The number of people 380 years of age or older has increased by 115,292,150,460,684,697,600 percent. The number of people 385 years of age or older has increased by 230,584,300,921,369,395,200 percent. The number of people 390 years of age or older has increased by 461,168,601,842,738,790,400 percent. The number of people 395 years of age or older has increased by 922,337,203,685,477,580,800 percent. The number of people 400 years of age or older has increased by 1,844,674,407,370,955,161,600 percent. The number of people 405 years of age or older has increased by 3,689,348,814,741,910,323,200 percent. The number of people 410 years of age or older has increased by 7,378,697,629,483,820,646,400 percent. The number of people 415 years of age or older has increased by 14,757,395,258,967,641,292,800 percent. The number of people 420 years of age or older has increased by 29,514,790,517,935,282,585,600 percent. The number of people 425 years of age or older has increased by 59,029,581,035,870,565,171,200 percent. The number of people 430 years of age or older has increased by 118,059,162,071,741,130,342,400 percent. The number of people 435 years of age or older has increased by 236,118,324,143,482,260,684,800 percent. The number of people 440 years of age or older has increased by 472,236,648,286,964,521,369,600 percent. The number of people 445 years of age or older has increased by 944,473,296,573,929,042,739,200 percent. The number of people 450 years of age or older has increased by 1,888,946,593,147,858,085,478,400 percent. The number of people 455 years of age or older has increased by 3,777,893,186,295,716,170,956,800 percent. The number of people 460 years of age or older has increased by 7,555,786,372,591,432,341,913,600 percent. The number of people 465 years of age or older has increased by 15,111,572,745,182,864,683,827,200 percent. The number of people 470 years of age or older has increased by 30,223,145,490,365,729,367,654,400 percent. The number of people 475 years of age or older has increased by 60,446,290,980,731,458,735,308,800 percent. The number of people 480 years of age or older has increased by 120,892,581,961,462,917,470,617,600 percent. The number of people 485 years of age or older has increased by 241,785,163,922,925,834,941,235,200 percent. The number of people 490 years of age or older has increased by 483,570,327,845,851,669,882,470,400 percent. The number of people 495 years of age or older has increased by 967,140,655,691,703,339,764,940,800 percent. The number of people 500 years of age or older has increased by 1,934,281,311,383,406,679,529,881,600 percent. The number of people 505 years of age or older has increased by 3,868,562,622,766,813,359,059,763,200 percent. The number of people 510 years of age or older has increased by 7,737,125,245,533,626,718,119,526,400 percent. The number of people 515 years of age or older has increased by 15,474,250,491,067,253,436,239,052,800 percent. The number of people 520 years of age or older has increased by 30,948,500,982,134,506,872,478,105,600 percent. The number of people 525 years of age or older has increased by 61,897,001,964,269,013,744,956,211,200 percent. The number of people 530 years of age or older has increased by 123,794,003,928,538,027,489,912,422,400 percent. The number of people 535 years of age or older has increased by 247,588,007,857,076,054,979,824,844,800 percent. The number of people 540 years of age or older has increased by 495,176,015,714,152,109,959,649,689,600 percent. The number of people 545 years of age or older has increased by 990,352,031,428,304,219,919,299,379,200 percent. The number of people 550 years of age or older has increased by 1,980,704,062,856,608,439,838,598,758,400 percent. The number of people 555 years of age or older has increased by 3,961,408,125,713,216,879,677,197,516,800 percent. The number of people 560 years of age or older has increased by 7,922,816,251,426,433,759,354,395,033,600 percent. The number of people 565 years of age or older has increased by 15,845,632,502,852,867,518,708,790,067,200 percent. The number of people 570 years of age or older has increased by 31,691,265,005,705

STRIKES AND LOOKOUTS IN THE UNITED STATES. 1115

RESULTS OF STRIKES TO EMPLOYEES THROWN OUT OF WORK, BY YEARS, 1881 TO 1900.

[This table does not include results for employees in 37 establishments in which strikes were still pending, etc.]

Year.	Employees thrown out of work by strikes.	Per cent of employees thrown out of work by strikes which—		
		Succeeded.	Succeeded partly.	Failed.
1881.....	129,521	42.98	13.50	43.57
1882.....	154,671	29.58	4.60	65.82
1883.....	149,763	36.82	11.37	51.81
1884.....	147,054	35.86	3.43	60.71
1885.....	242,705	47.54	9.83	42.63
1886.....	507,796	38.48	14.61	46.91
1887.....	379,676	33.60	6.97	59.43
1888.....	147,704	27.83	7.54	64.63
1889.....	249,550	28.89	25.09	46.02
1890.....	351,912	45.12	13.77	41.11
1891.....	298,939	27.02	7.65	65.33
1892.....	206,671	29.58	7.95	62.47
1893.....	254,524	23.44	15.79	60.77
1894.....	660,425	17.79	20.83	61.38
1895.....	392,403	39.86	11.14	49.00
1896.....	241,170	41.39	14.31	44.30
1897.....	408,391	38.90	37.29	23.81
1898.....	249,002	43.64	9.24	47.12
1899.....	417,072	54.48	14.30	31.22
1900.....	504,002	28.81	38.75	32.44
Total.....	6,102,960	35.02	16.72	48.26

RESULTS OF STRIKES UNDERTAKEN FOR FIVE LEADING CAUSES, 1881 TO 1900.

[This table does not include results for 37 establishments in which strikes were still pending., etc.]

Cause or object of strike.	Establishments involved in strikes.		Per cent of establishments in which strikes—		
	Number.	Per cent.	Succeeded.	Succeeded partly.	Failed.
For increase of wages.....	52,117	44.35	55.27	26.35	18.38
Against reduction of wages.....	9,173	7.81	38.06	12.07	49.87
For reduction of hours.....	13,116	11.16	49.43	8.66	41.91
For labor unionism (or against nonunionism).....	8,209	6.99	45.89	3.39	51.22
Sympathetic strikes.....	4,075	3.47	25.03	2.33	72.64
All other causes.....	30,782	26.22	52.35	10.14	37.51
Total.....	117,472	100.00	50.77	13.04	36.19

From these tables were constructed the following charts, reproductions of which are given opposite page 1114:

Chart 16.—Results of strikes ordered by labor organizations and not so ordered, by years, 1881 to 1900.

Chart 17.—Results of strikes ordered by labor organizations and not so ordered, by industries, 1881 to 1900.

Chart 18.—Results of strikes, by States, 1881 to 1900.

Chart 19.—Results of strikes to employees thrown out of work, by years, 1881 to 1900.

Chart 20.—Results of strikes undertaken for 5 leading causes, 1881 to 1900.

Chart 16 and the table upon which it is based take up separately strikes ordered by labor organizations and not so ordered, showing for each the per cent of establishments in which the strike succeeded, succeeded partly, and failed. A total of 14,457 strikes were ordered

by labor organizations as against 8,326 not so ordered. Of the former, success was gained in 52.86 per cent of the establishments involved, partial success was gained in 13.60 per cent, while in 33.54 per cent the strikes failed. In the strikes not ordered by labor organizations, success was gained in only 35.56 per cent of the establishments involved, partial success in 9.05 per cent, while in 55.39 per cent the strikes failed. An examination of the data for each of the years of the period shows practically similar results as regards the strikes ordered and not ordered by labor organizations. In each year of the period except 1891 and 1892 it is found that the majority of the strikes ordered by labor organizations resulted in at least partial success for the strikers, and while a large proportion of the strikes not ordered by labor organizations were also successful, it is quite clear that strikes carried on under the auspices of labor organizations were more generally successful than those not so assisted. Taking into consideration all strikes which occurred during the twenty-year period, the report of the bureau shows that success was gained in 50.77 per cent of the establishments involved, partial success was gained in 13.04 per cent, while the strikes failed in 36.19 per cent.

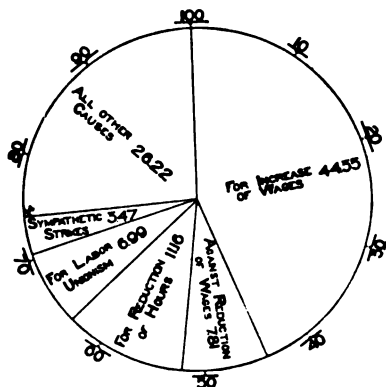
Chart 17 shows similar facts by industries for strikes ordered and not ordered by labor organizations, while chart 18, showing the data by States, differs somewhat, inasmuch as it does not show the facts separately for strikes ordered and not ordered by labor organizations. The next chart, 19, shows the results of strikes, so far as employees are concerned, for each year of the period ending with 1900. It is seen that of the 6,102,960 employees thrown out of work in establishments for which the results of strikes were reported, 35.02 per cent were thrown out by strikes which succeeded, 16.72 per cent by strikes which succeeded partly, and 48.26 per cent by strikes which failed.

Chart 20 summarizes the results of strikes undertaken for leading causes, showing for each of the five leading causes of strikes the per cent of establishments in which strikes succeeded, succeeded partly, and failed. It is also shown that during the period 44.35 per cent of all strikes involved a demand for increase of wages, while 7.81 were undertaken to prevent a reduction of wages. In 11.16 per cent the demand was for a reduction in hours, in 6.99 per cent for labor unionism, while 3.47 per cent of strikes were undertaken in sympathy with striking employees in other establishments. It is thus seen that in 73.78 per cent of the establishments involved in strikes the strike was undertaken for one of the five causes mentioned above, while but 26.22 per cent of establishments were involved in strikes which were undertaken for all other causes combined. It is also shown by this chart that the strikes for increase of wages, which involved over 44 per cent of the total number of establishments in which strikes

occurred during the period, succeeded in 55.27 per cent of the establishments, met with partial success in 26.35 per cent, while they failed in but 18.38 per cent. Strikes undertaken to prevent a reduction of wages, however, were not so successful, success being entirely gained in but 38.06 per cent of the establishments involved, partial success being gained in 12.07 per cent, while failure resulted in 49.87 per cent. The strikes for reduction of hours failed in but 41.91 per cent of the establishments involved, while those for labor unionism failed in 51.22 per cent. A much greater percentage is recorded for sympathetic strikes, such strikes meeting with absolute failure in as large a proportion as 72.64 per cent of the establishments involved.

The final chart of the series, 21, "Per cent of strikes undertaken for leading causes during twenty years, 1881 to 1900," which immediately follows, brings out very clearly the proportion of strikes undertaken for each of the causes previously mentioned, as compared with the entire number of strikes for all causes during the period.

CHART 21.



WAGES IN THE UNITED STATES AND IN EUROPE, 1890 TO 1903.

BY G. W. W. HANGER.

A review of the work of the Bureau of Labor discloses the fact that in almost every report there is found more or less space given to the important subject of wages. One of the most interesting of its collections of data of this character is that published in the Bulletin for September, 1898, consisting of data for certain skilled trades in leading cities in the United States and in Europe for each year of the period from 1870 to 1898. Twenty-five occupations, susceptible of accurate definition and common to each of the countries canvassed, were included in the statement and an effort was made to secure data for each from leading cities in the United States, Great Britain, France, and Belgium.

In considering the preparation of the exhibition of the Bureau at the Louisiana Purchase Exposition it was concluded that the above-mentioned data were not available because of the fact that recent years were not covered, and it was therefore decided to undertake the collection of representative figures for Europe for the period from 1890 to 1903. The number of occupations covered was limited to 13 important and well-defined trades, and the inquiry was prosecuted not only in Great Britain, France, and Belgium, but also in Germany. The inquiry was extended to cover hours of labor as well as wages.

The figures for the United States which it was designed to bring into comparison with this collection of foreign data were the result of an extensive investigation into wages, hours of labor, etc., upon which the Bureau had been engaged for the past two or three years and which was just nearing completion.

The results of these investigations, which it is believed are thoroughly representative of the course of wages and hours of labor in the various countries and which also indicate the level of wages in the same occupation, are given in the table following.

The exhibit of the Bureau, so far as it covers wages and hours of labor, consists of 13 charts, each of which clearly indicates for an occupation the trend as well as the level of wages and hours of labor in each of the countries covered. Reproductions of these charts accompany the table.

WAGES AND HOURS OF LABOR IN LEADING OCCUPATIONS IN THE UNITED STATES AND IN EUROPE, 1890 TO 1903.

BLACKSMITHS.

Year.	Wages per hour.					Hours per week.				
	United States. (a)	Great Britain.	Germany.	France.	Belgium.	United States. (a)	Great Britain.	Germany.	France.	Belgium.
1890.....	\$0.2677	\$0.1652	\$0.1175	\$0.1474	.....	59.41	54.00	62.00	60.34	.....
1891.....	.2681	.1650	.1099	.1474	.....	59.20	53.67	67.50	60.34	.....
1892.....	.2672	.1671	.1129	.1474	.....	59.37	53.67	61.94	60.34	.....
1893.....	.2677	.1654	.1101	.1474	.....	59.03	53.67	61.95	60.34	.....
1894.....	.2617	.1674	.1020	.1573	.....	58.68	53.67	61.88	60.34	.....
1895.....	.2602	.1695	.1069	.1573	.....	59.18	53.67	61.38	60.34	.....
1896.....	.2643	.1716	.1136	.1573	.....	58.93	53.67	61.38	60.34	.....
1897.....	.2604	.1740	.1209	.1608	.....	58.96	53.67	59.88	60.34	.....
1898.....	.2587	.1747	.1129	.1617	.....	59.20	53.67	62.50	60.34	.....
1899.....	.2637	.1770	.1173	.1617	.....	58.98	53.67	59.99	60.34	.....
1900.....	.2685	.1724	.1300	.1617	.....	58.87	53.67	60.00	60.34	.....
1901.....	.2757	.1722	.1235	.1617	.....	57.78	53.67	60.00	60.34	.....
1902.....	.2844	.1742	.1228	.1617	.....	57.17	53.67	58.49	60.34	.....
1903.....	.2951	.1740	.1237	.1629	.....	56.56	53.67	59.90	60.19	.....

BOILER MAKERS.

Year.	Wages per hour.					Hours per week.				
	United States.	Great Britain.	Germany (Berlin only).	France.	Belgium.	United States.	Great Britain.	Germany (Berlin only).	France.	Belgium.
1890.....	\$0.2594	\$0.1596	\$0.0986	\$0.1417	\$0.0742	59.25	54.00	64.00	63.00	60.00
1891.....	.2577	.1603	.0881	.1417	.0735	59.23	53.67	75.00	63.00	60.00
1892.....	.2585	.1711	.0931	.1417	.0735	58.88	53.67	64.00	63.00	60.00
1893.....	.2583	.1646	.0912	.1417	.0749	58.39	53.67	64.00	63.00	60.00
1894.....	.2614	.1636	.0892	.1417	.0745	58.45	53.67	64.00	63.00	60.00
1895.....	.2629	.1645	.0965	.1417	.0746	58.47	53.67	63.00	63.00	60.00
1896.....	.2626	.1683	.0961	.1417	.0749	58.02	53.67	63.00	63.00	60.00
1897.....	.2607	.1677	.0937	.1417	.0749	58.11	53.67	68.00	63.00	60.00
1898.....	.2617	.1727	.1024	.1417	.0749	58.30	53.67	68.00	63.00	60.00
1899.....	.2654	.1744	.1059	.1417	.0749	58.06	53.67	64.00	63.00	60.00
1900.....	.2773	.1736	.1091	.1417	.0746	57.36	53.67	60.00	63.00	60.00
1901.....	.2794	.1735	.1088	.1455	.0751	56.82	53.67	60.00	61.50	60.00
1902.....	.2800	.1737	.1065	.1455	.0751	56.33	53.67	57.00	61.50	60.00
1903.....	.2848	.1719	.1123	.1455	.0753	56.24	53.67	60.00	61.50	60.00

BRICKLAYERS.

Year.	Wages per hour.					Hours per week.				
	United States.	Great Britain.	Germany.	France.	Belgium.	United States.	Great Britain.	Germany.	France.	Belgium.
1890.....	\$0.4316	\$0.1757	\$0.1108	\$0.1277	\$0.0700	53.22	52.67	59.75	63.00	62.00
1891.....	.4365	.1791	.1096	.1277	.0693	52.80	52.67	59.75	63.00	62.00
1892.....	.4431	.1859	.1092	.1277	.0686	52.19	51.83	59.75	63.00	62.00
1893.....	.4436	.1859	.1094	.1277	.0687	51.63	51.83	59.75	63.00	62.00
1894.....	.4325	.1892	.1098	.1277	.0681	51.96	51.83	59.75	63.00	62.00
1895.....	.4367	.1892	.1062	.1277	.0683	51.56	51.83	59.75	63.00	62.00
1896.....	.4337	.1960	.1155	.1277	.0670	51.50	51.83	56.50	63.00	62.00
1897.....	.4361	.1994	.1166	.1325	.0677	51.11	51.83	56.50	63.00	62.00
1898.....	.4331	.1994	.1236	.1325	.0729	50.47	51.83	56.50	63.00	62.00
1899.....	.4597	.2028	.1247	.1325	.0731	49.24	51.83	56.50	63.00	62.00
1900.....	.4672	.2028	.1274	.1325	.0782	49.32	51.83	56.50	63.00	62.00
1901.....	.4912	.1994	.1303	.1325	.0821	48.62	51.83	56.50	63.00	62.00
1902.....	.5178	.2062	.1299	.1325	.0820	48.27	51.83	56.50	63.00	62.00
1903.....	.5472	.2062	.1328	.1325	.0845	47.83	51.83	56.50	63.00	62.00

a The wages and hours of labor shown for the United States are for blacksmiths in the foundry and machine shop industry only.

WAGES AND HOURS OF LABOR IN LEADING OCCUPATIONS IN THE UNITED STATES AND IN EUROPE, 1890 TO 1903—Continued.

CARPENTERS.

Year.	Wages per hour.					Hours per week.				
	United States. (a)	Great Britain.	Germany.	France.	Belgium.	United States. (a)	Great Britain.	Germany.	France.	Belgium.
1890.....	\$0.2713	\$0.1690	\$0.1025	\$0.1544	\$0.0713	55.94	52.67	59.41	60.00	64.87
1891.....	.2730	.1757	.1042	.1544	.0711	55.56	51.83	59.49	60.00	64.93
1892.....	.2825	.1791	.1010	.1544	.0714	56.12	51.00	59.28	60.00	64.51
1893.....	.2744	.1791	.1015	.1544	.0722	55.22	51.00	59.36	60.00	64.61
1894.....	.2693	.1791	.0998	.1544	.0730	55.27	51.00	59.45	60.00	64.54
1895.....	.2692	.1825	.1043	.1544	.0719	55.05	50.17	59.26	60.00	64.78
1896.....	.2740	.1893	.1085	.1544	.0737	54.67	50.17	59.05	60.00	64.60
1897.....	.2753	.1926	.1090	.1544	.0723	54.32	50.17	58.17	60.00	64.68
1898.....	.2790	.1926	.1105	.1544	.0727	54.02	50.17	58.99	60.00	64.67
1899.....	.2839	.1994	.1188	.1544	.0728	53.42	50.17	55.79	60.00	64.77
1900.....	.3049	.2028	.1215	.1544	.0728	51.86	50.17	55.47	60.00	64.65
1901.....	.3190	.2028	.1250	.1544	.0729	50.74	50.17	56.37	60.00	64.71
1902.....	.3403	.2028	.1263	.1544	.0728	49.70	50.17	55.48	60.00	64.77
1903.....	.3594	.2028	.1301	.1544	.0712	49.46	50.17	55.30	60.00	64.73

COMPOSITORS.

Year.	Wages per hour.					Hours per week.				
	United States. (b)	Great Britain.	Germany (Nuremberg only).	France.	Belgium.	United States. (b)	Great Britain.	Germany (Nuremberg only).	France.	Belgium.
1890.....	\$0.3980	\$0.1572	\$0.1065	\$0.1207	\$0.0788	53.15	54.33	57.40	60.00	60.00
1891.....	.3997	.1651	.1048	.1207	.0756	52.62	52.67	57.78	60.00	60.00
1892.....	.4013	.1689	.1109	.1207	.0772	52.58	52.17	57.32	60.00	60.00
1893.....	.3933	.1692	.1141	.1207	.0762	53.13	52.17	57.10	60.00	60.00
1894.....	.3796	.1698	.1153	.1207	.0790	52.75	52.17	56.36	60.00	60.00
1895.....	.3827	.1689	.1238	.1207	.0794	52.73	52.17	53.41	60.00	60.00
1896.....	.3897	.1695	.1215	.1207	.0796	52.58	52.17	53.60	60.00	60.00
1897.....	.3925	.1697	.1295	.1207	.0825	52.47	52.17	51.16	60.00	60.00
1898.....	.3934	.1697	.1282	.1255	.0820	52.06	52.17	51.13	60.00	60.00
1899.....	.4066	.1699	.1294	.1255	.0825	51.26	52.17	51.47	60.00	60.00
1900.....	.4071	.1699	.1299	.1255	.0833	51.09	52.17	50.80	60.00	60.00
1901.....	.4252	.1730	.1364	.1255	.0820	50.37	51.67	50.47	60.00	60.00
1902.....	.4352	.1768	.1369	.1255	.0907	49.96	50.83	51.21	60.00	54.00
1903.....	.4467	.1795	.1411	.1303	.0955	49.81	50.00	51.08	60.00	54.00

HOD CARRIERS.

Year.	Wages per hour.					Hours per week.				
	United States.	Great Britain.	Germany.	France (Paris only).	Belgium.	United States.	Great Britain.	Germany.	France (Paris only).	Belgium.
1890.....	\$0.2259	\$0.1217	\$0.0675	\$0.0965	\$0.0471	52.78	52.67	59.75	66.00	62.00
1891.....	.2248	.1217	.0689	.0965	.0472	52.54	52.67	59.75	66.00	62.00
1892.....	.2314	.1250	.0680	.0965	.0476	51.80	51.83	59.75	66.00	62.00
1893.....	.2325	.1250	.0691	.0965	.0479	51.64	51.83	59.75	66.00	62.00
1894.....	.2303	.1250	.0690	.0965	.0413	52.03	51.83	59.75	66.00	62.00
1895.....	.2320	.1318	.0684	.0965	.0493	51.53	51.83	59.75	66.00	62.00
1896.....	.2335	.1250	.0714	.0965	.0460	51.45	51.83	59.50	66.00	62.00
1897.....	.2322	.1250	.0712	.0965	.0472	51.42	51.83	59.50	63.57	62.00
1898.....	.2343	.1250	.0742	.0965	.0527	51.01	51.83	59.50	63.71	62.00
1899.....	.2518	.1250	.0758	.0965	.0532	49.79	51.83	59.50	63.83	62.00
1900.....	.2498	.1250	.0807	.0965	.0559	49.79	51.83	59.50	64.04	62.00
1901.....	.2546	.1250	.0805	.0965	.0566	49.35	51.83	59.50	64.46	62.00
1902.....	.2676	.1250	.0811	.0965	.0431	48.56	51.83	59.50	64.42	62.00
1903.....	.2863	.1250	.0849	.0965	(c)	47.98	51.83	59.50	63.91	(c)

*The wages and hours of labor shown for the United States are for carpenters in the building industry only.

†The wages and hours of labor shown for the United States are for compositors, newspaper, only.

‡No data obtained.

WAGES AND HOURS OF LABOR IN LEADING OCCUPATIONS IN THE UNITED STATES AND IN EUROPE, 1890 TO 1903—Continued.

IRON MOLDERS.

Year.	Wages per hour.					Hours per week.				
	United States. (a)	Great Britain.	Germany.	France (Paris only).	Belgium.	United States. (a)	Great Britain.	Germany.	France (Paris only).	Belgium.
1890.....	\$0.2540	\$0.1678	\$0.1009	\$0.1119	(b)	59.51	54.00	60.00	60.00	(b)
1891.....	.2565	.1678	.1051	.1158	(b)	59.60	53.67	60.00	60.00	(b)
1892.....	.2548	.1677	.1059	.1079	(b)	59.49	53.67	60.00	60.00	(b)
1893.....	.2557	.1683	.1024	.1158	(b)	59.18	53.67	60.00	60.00	(b)
1894.....	.2472	.1680	.0939	.1181	(b)	59.10	53.67	60.00	60.00	(b)
1895.....	.2476	.1700	.1008	.1204	(b)	59.29	53.67	60.00	60.00	(b)
1896.....	.2507	.1698	.1072	.1245	(b)	59.24	53.67	60.00	60.00	(b)
1897.....	.2525	.1756	.1017	.1253	\$0.0611	59.17	53.67	60.00	60.00	60.00
1898.....	.2503	.1764	.1028	.1239	.0619	59.32	53.67	60.00	60.00	60.00
1899.....	.2568	.1790	.1102	.1256	.0608	59.14	53.67	60.00	60.00	60.00
1900.....	.2694	.1790	.1140	.1245	.0640	59.07	53.67	60.00	60.00	60.00
1901.....	.2739	.1766	(b)	.1255	.0646	58.47	53.67	(b)	60.00	60.00
1902.....	.2894	.1765	(b)	.1282	.0659	57.65	53.67	(b)	60.00	60.00
1903.....	.3036	.1787	(b)	.1310	.0692	56.80	53.67	(b)	60.00	60.00

LABORERS, GENERAL.

Year.	Wages per hour.					Hours per week.				
	United States. (c)	Great Britain.	Germany.	France (Paris only).	Belgium.	United States. (c)	Great Britain.	Germany.	France (Paris only).	Belgium.
1890.....	\$0.1507	\$0.0948	\$0.0641	\$0.0965	\$0.0524	59.02	54.17	59.98	60.00	63.00
1891.....	.1511	.0964	.0632	.0965	.0524	59.02	53.33	60.01	60.00	63.00
1892.....	.1519	.0960	.0629	.0966	.0524	59.02	53.33	60.07	60.00	63.00
1893.....	.1493	.0954	.0630	.0965	.0524	58.84	53.33	60.06	60.00	63.00
1894.....	.1419	.0955	.0634	.0965	.0524	58.76	53.33	59.96	60.00	63.00
1895.....	.1440	.0960	.0640	.0965	.0524	58.88	53.33	60.06	60.00	63.00
1896.....	.1415	.0958	.0643	.0965	.0524	58.92	53.33	60.29	60.00	63.00
1897.....	.1445	.0975	.0645	.0965	.0524	58.90	53.33	59.80	60.00	63.00
1898.....	.1466	.0997	.0676	.0965	.0524	58.44	52.50	59.74	60.00	63.00
1899.....	.1457	.1015	.0704	.0965	.0524	58.71	52.50	59.62	60.00	63.00
1900.....	.1461	.1022	.0711	.0965	.0549	58.27	52.50	56.70	60.00	63.00
1901.....	.1585	.1028	.0763	.0965	.0549	57.98	52.50	56.62	60.00	63.00
1902.....	.1643	.1052	.0768	.0965	.0549	56.66	52.50	56.68	60.00	63.00
1903.....	.1675	.1019	.0797	.0965	.0549	56.39	52.50	56.36	60.00	63.00

MACHINISTS.

Year.	Wages per hour.					Hours per week.				
	United States. (d)	Great Britain.	Germany (Berlin only).	France.	Belgium.	United States. (d)	Great Britain.	Germany (Berlin only).	France.	Belgium.
1890.....	\$0.2409	\$0.1534	\$0.0973	\$0.1256	.....	59.52	54.00	64.00	61.90	.....
1891.....	.2426	.1594	.1040	.1256	.....	59.47	53.67	65.00	61.89	.....
1892.....	.2452	.1590	.1046	.1267	.....	59.24	53.67	60.00	61.89	.....
1893.....	.2143	.1585	.1027	.1270	.....	59.03	53.67	68.00	61.89	.....
1894.....	.2336	.1588	.1107	.1272	.....	59.07	53.67	64.00	61.89	.....
1895.....	.2338	.1590	.1090	.1278	.....	59.08	53.67	63.00	61.88	.....
1896.....	.2388	.1607	.1057	.1279	.....	59.01	53.67	63.00	61.88	.....
1897.....	.2391	.1663	.1115	.1312	.....	58.96	53.67	64.00	61.82	.....
1898.....	.2374	.1654	.1129	.1335	.....	59.11	53.67	70.00	61.83	.....
1899.....	.2415	.1685	.1110	.1325	.....	58.72	53.67	64.00	64.18	.....
1900.....	.2484	.1684	.1211	.1325	.....	58.56	53.67	64.00	64.18	.....
1901.....	.2560	.1677	.1155	.1331	.....	57.37	53.67	60.00	61.50	.....
1902.....	.2644	.1691	.1141	.1310	.....	56.56	53.67	57.00	61.50	.....
1903.....	.2707	.1677	.1310	.1326	.....	56.12	53.67	60.00	61.50	.....

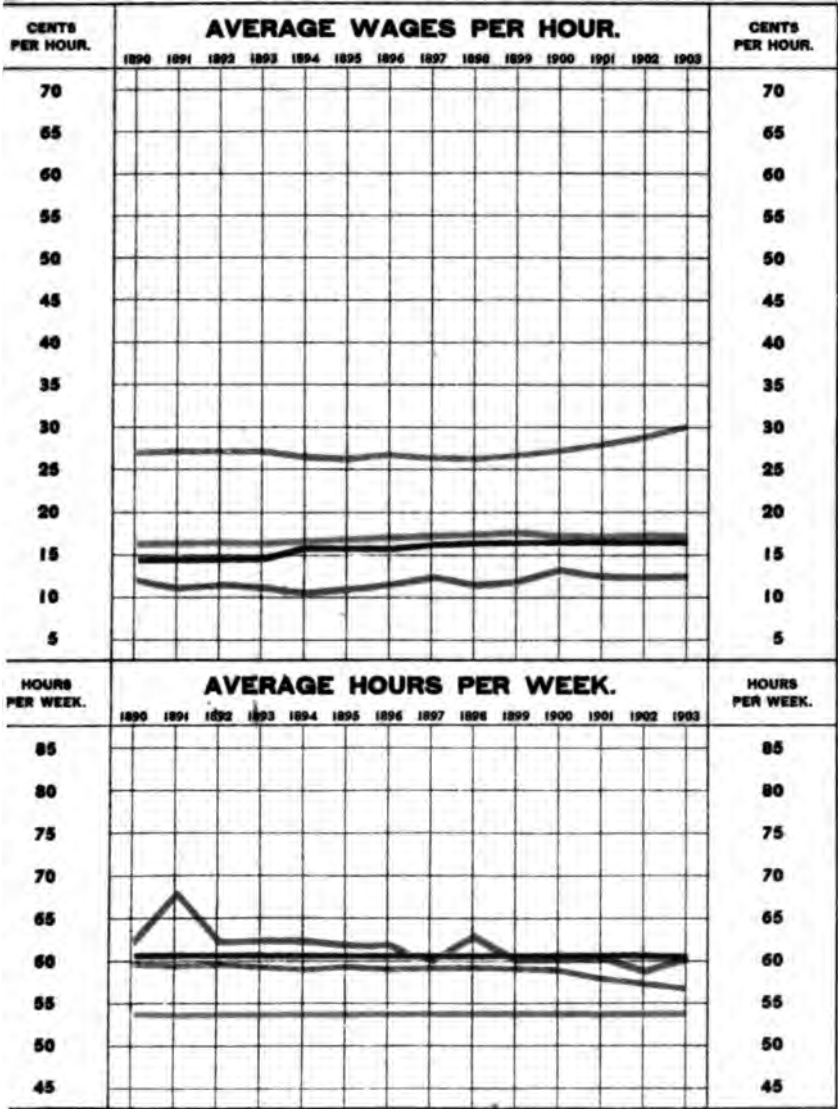
a The wages and hours of labor shown for the United States are for iron molders in the foundry and machine shop industry only.

b No data obtained.

c The wages and hours of labor shown for the United States are for laborers in the building industry only.

d The wages and hours of labor shown for the United States are for machinists in the foundry and machine shop industry only.

WAGES AND HOURS OF LABOR: UNITED STATES AND EUROPE-1890 TO 1903. BLACKSMITHS.

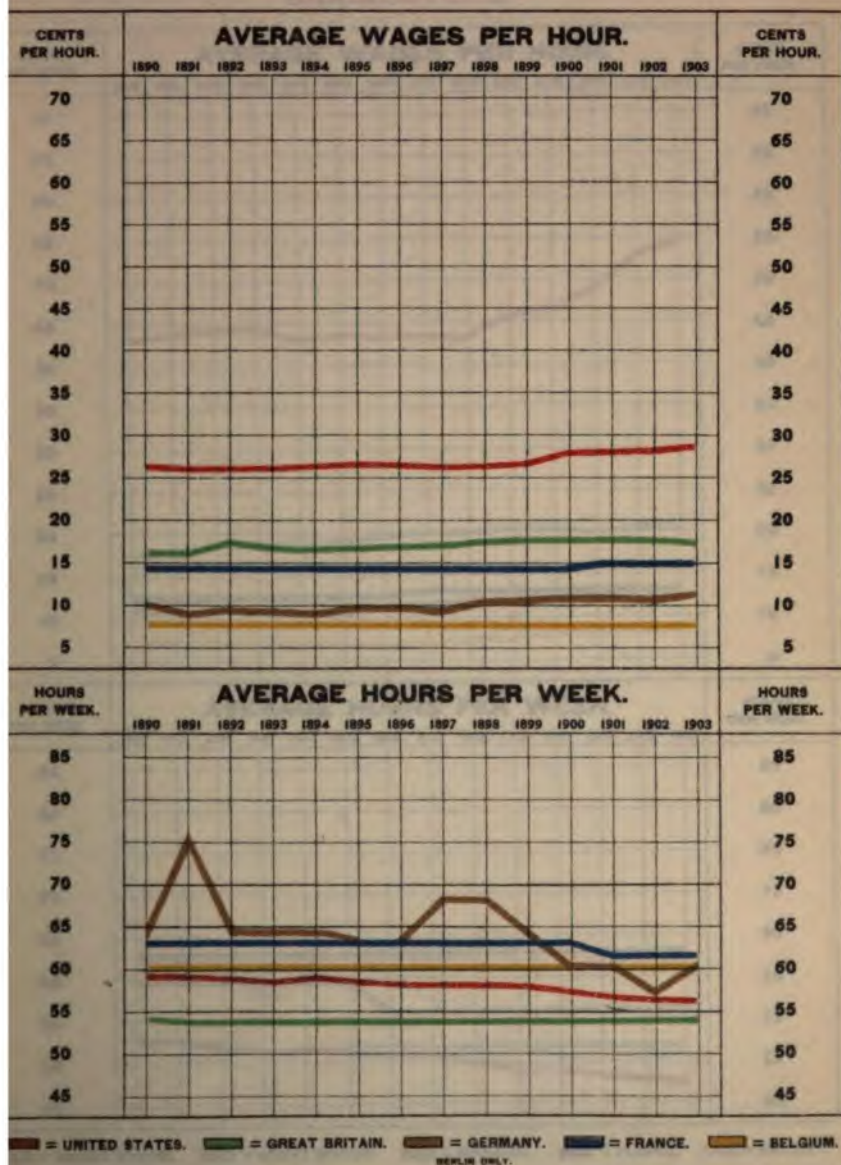


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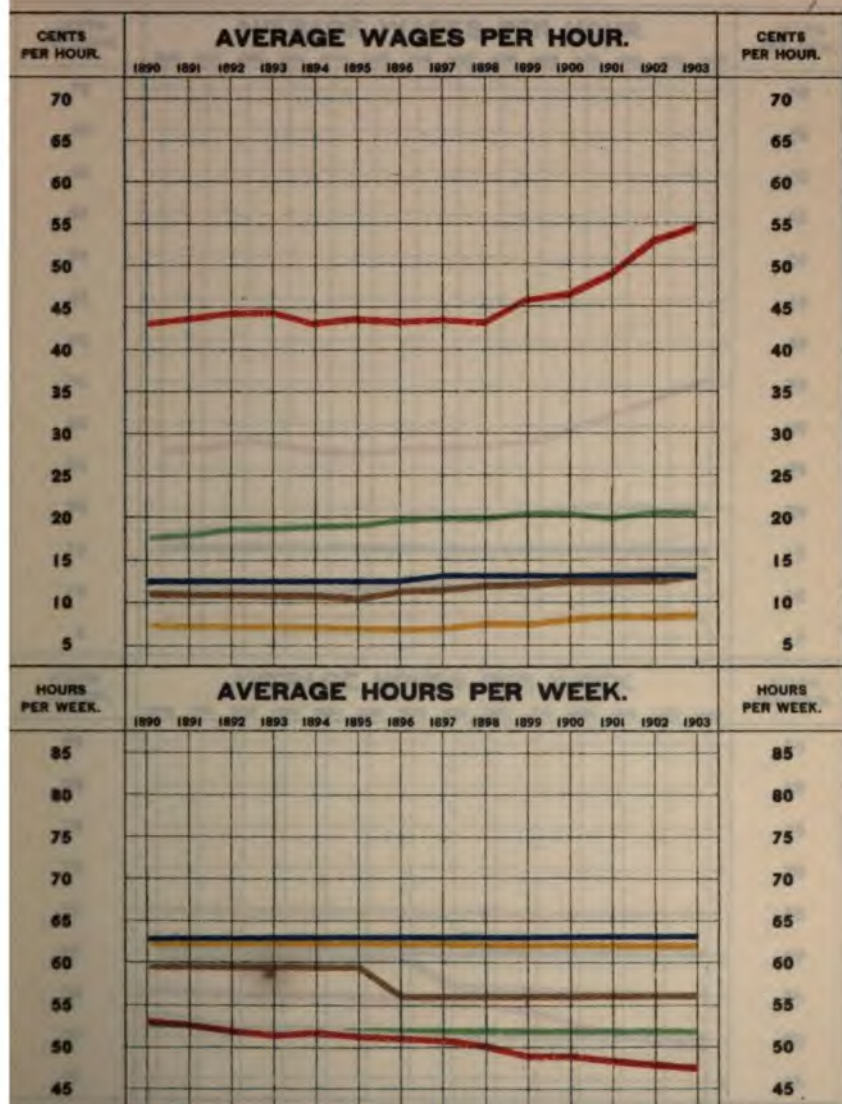
WAGES AND HOURS OF LABOR: UNITED STATES AND EUROPE-1890 TO 1903.

BOILERMAKERS.

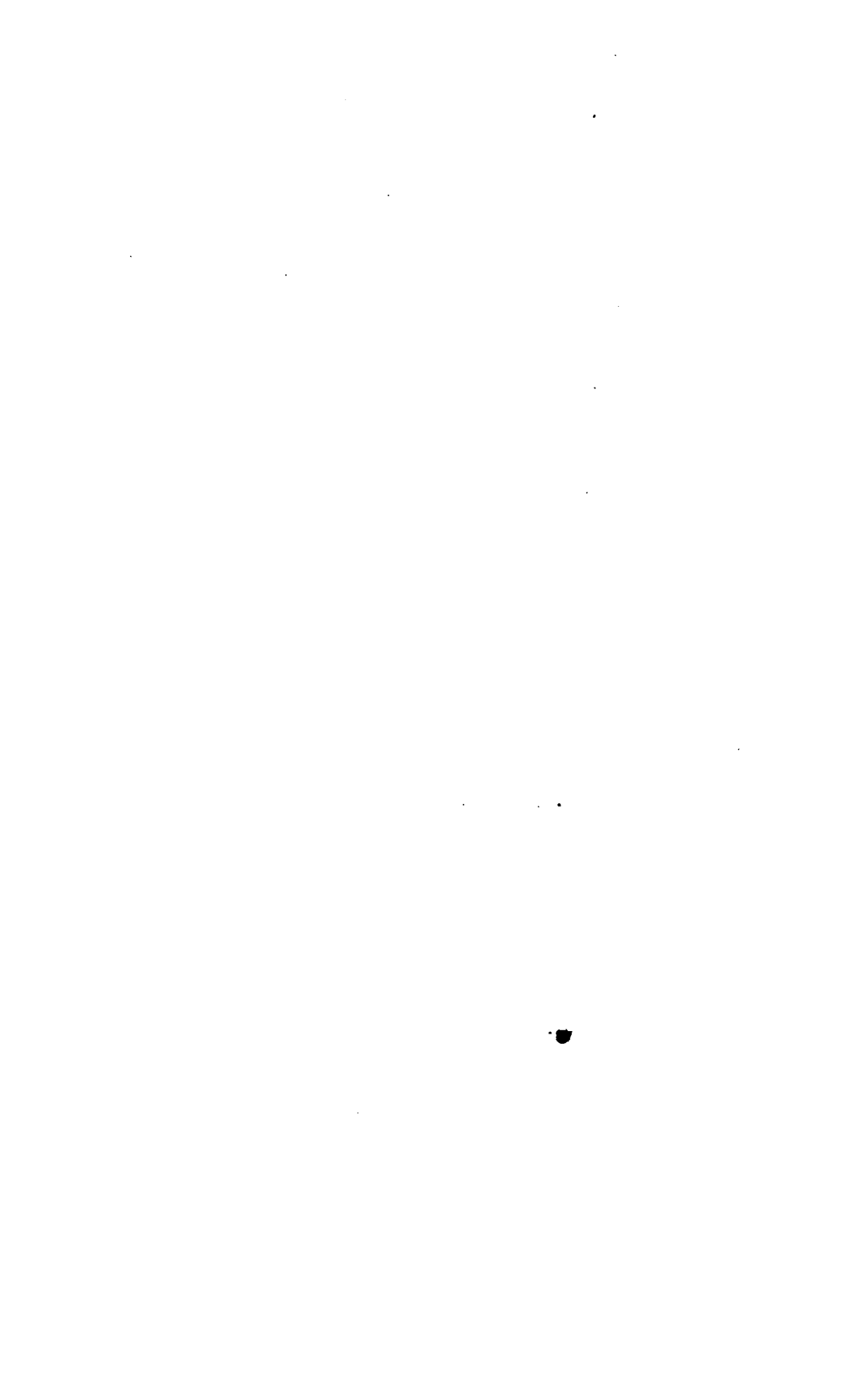


WAGES AND HOURS OF LABOR: UNITED STATES AND EUROPE-1890 TO 1903.

BRICKLAYERS.

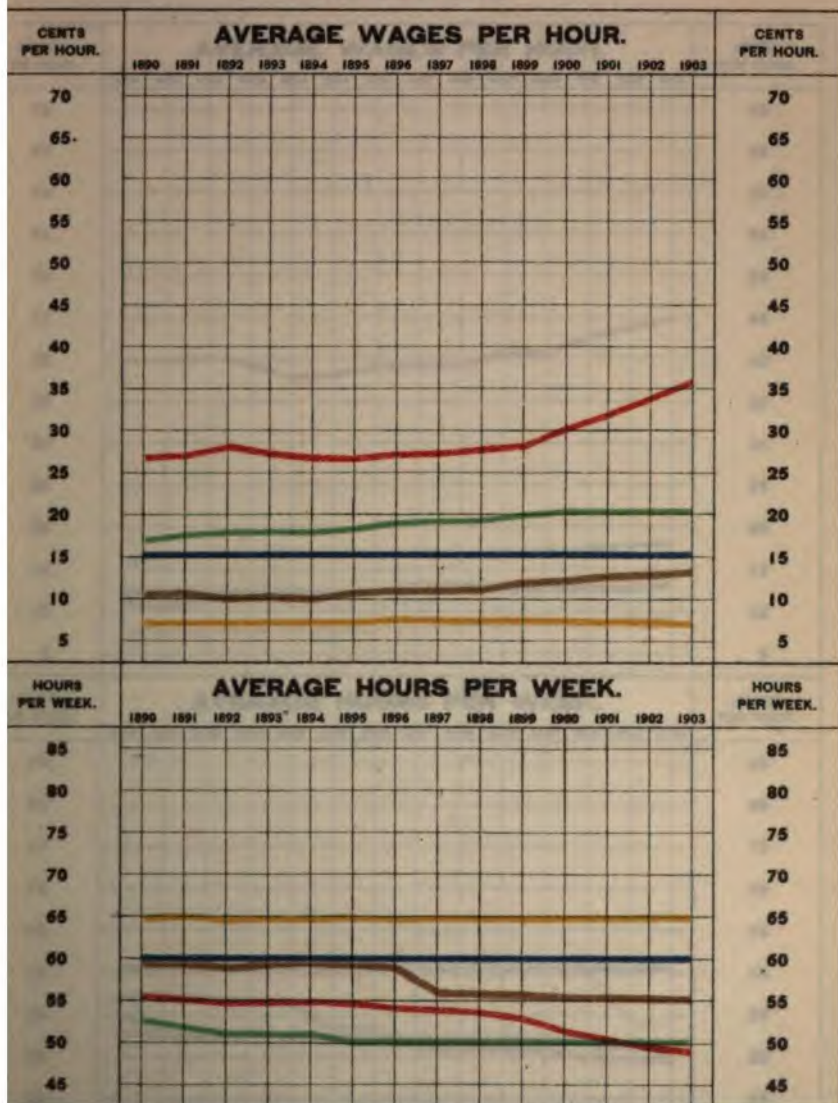


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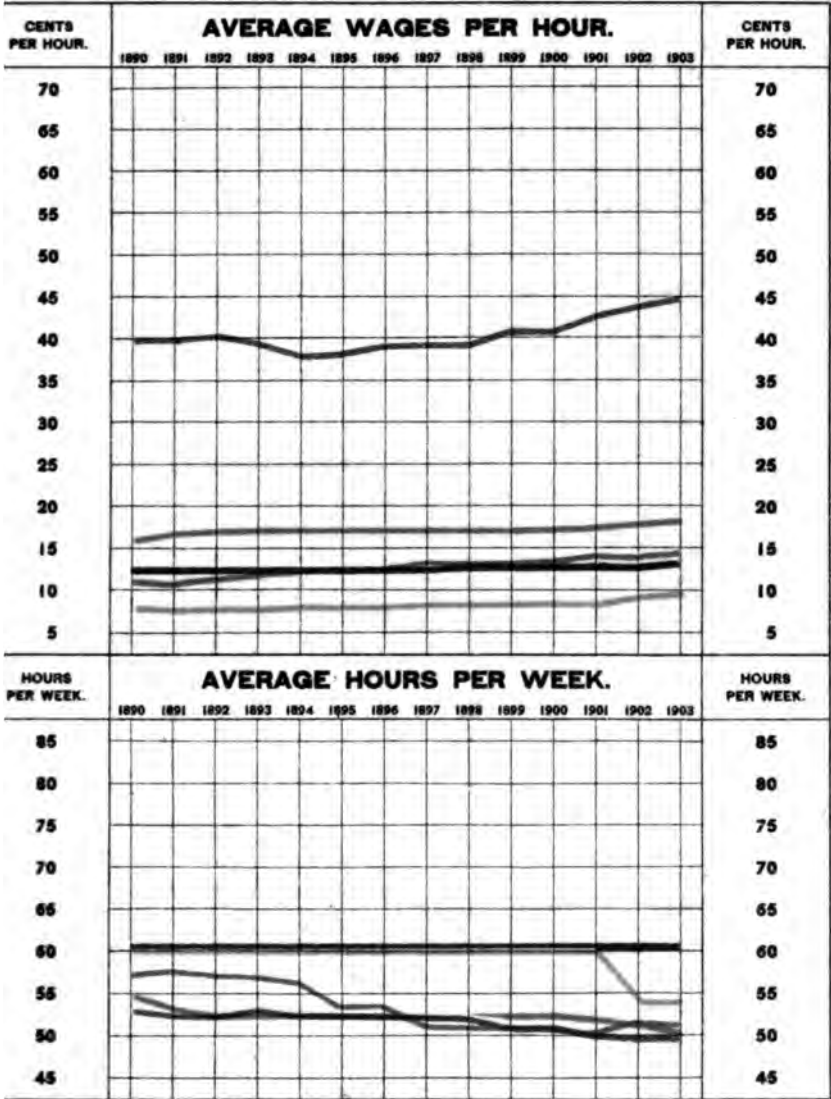
WAGES AND HOURS OF LABOR: UNITED STATES AND EUROPE-1890 TO 1903.

CARPENTERS.



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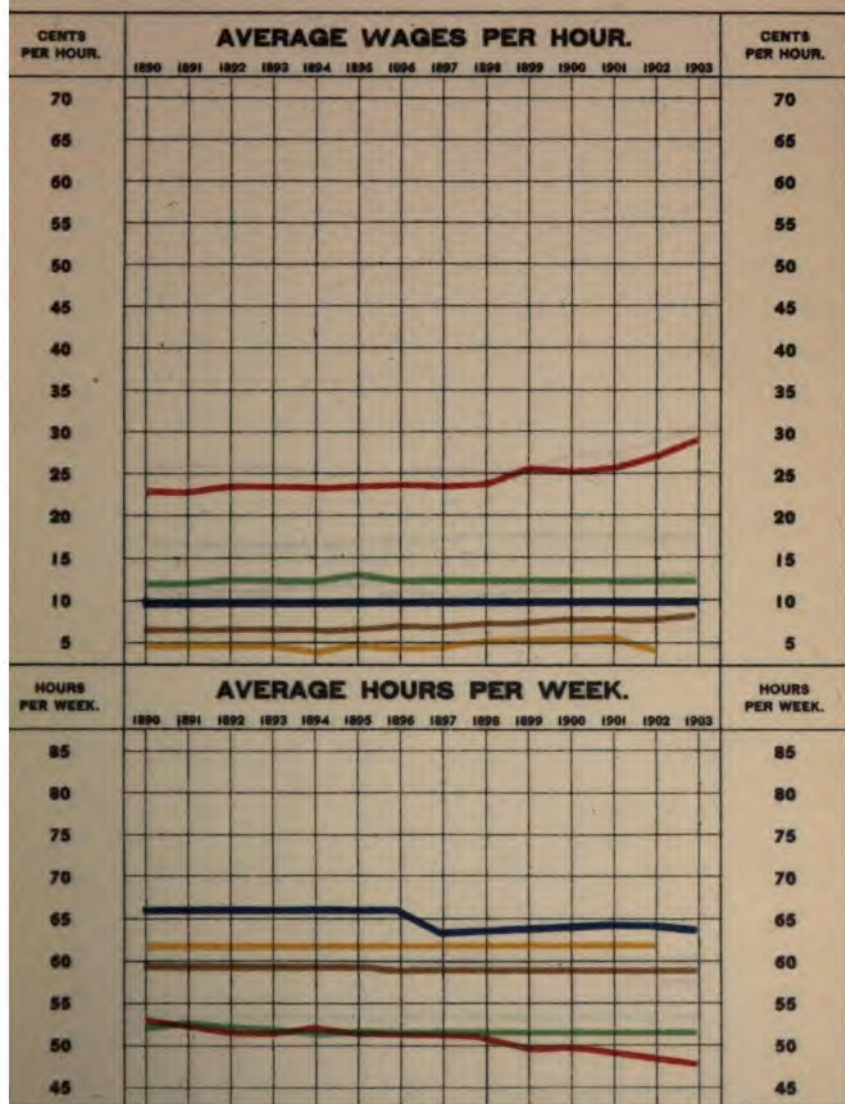
WAGES AND HOURS OF LABOR: UNITED STATES AND EUROPE-1890 TO 1903. **COMPOSITORS.**



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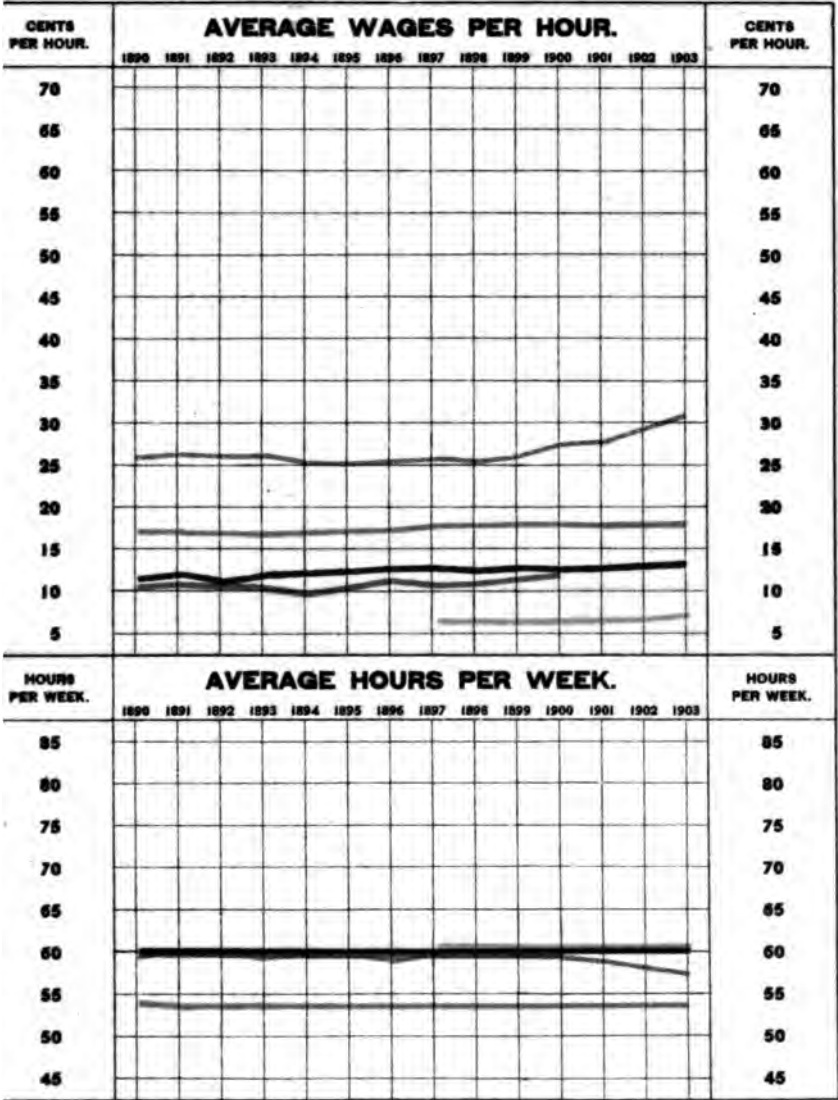
WAGES AND HOURS OF LABOR: UNITED STATES AND EUROPE-1890 TO 1903.

HOD CARRIERS.



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WAGES AND HOURS OF LABOR: UNITED STATES AND EUROPE-1890 TO 1903. **IRON MOLDERS.**



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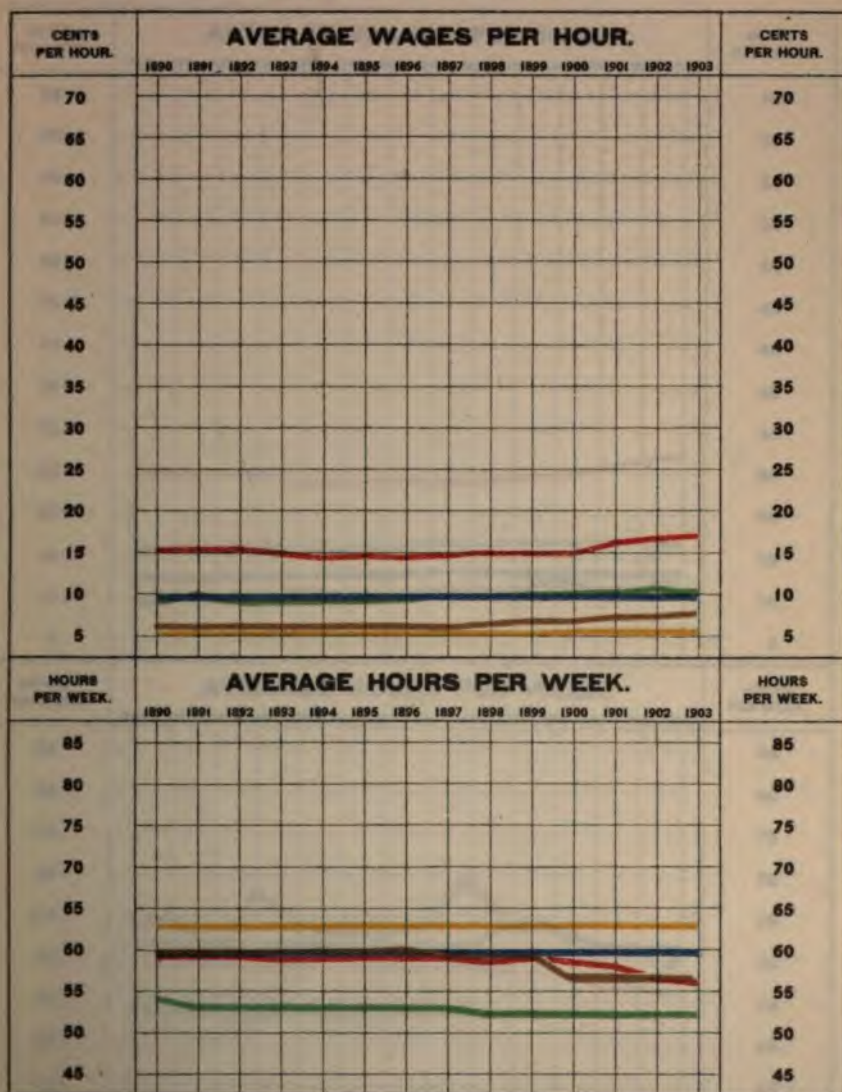
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WAGES AND HOURS OF LABOR: UNITED STATES AND EUROPE-1890 TO 1903:

LABORERS-GENERAL.

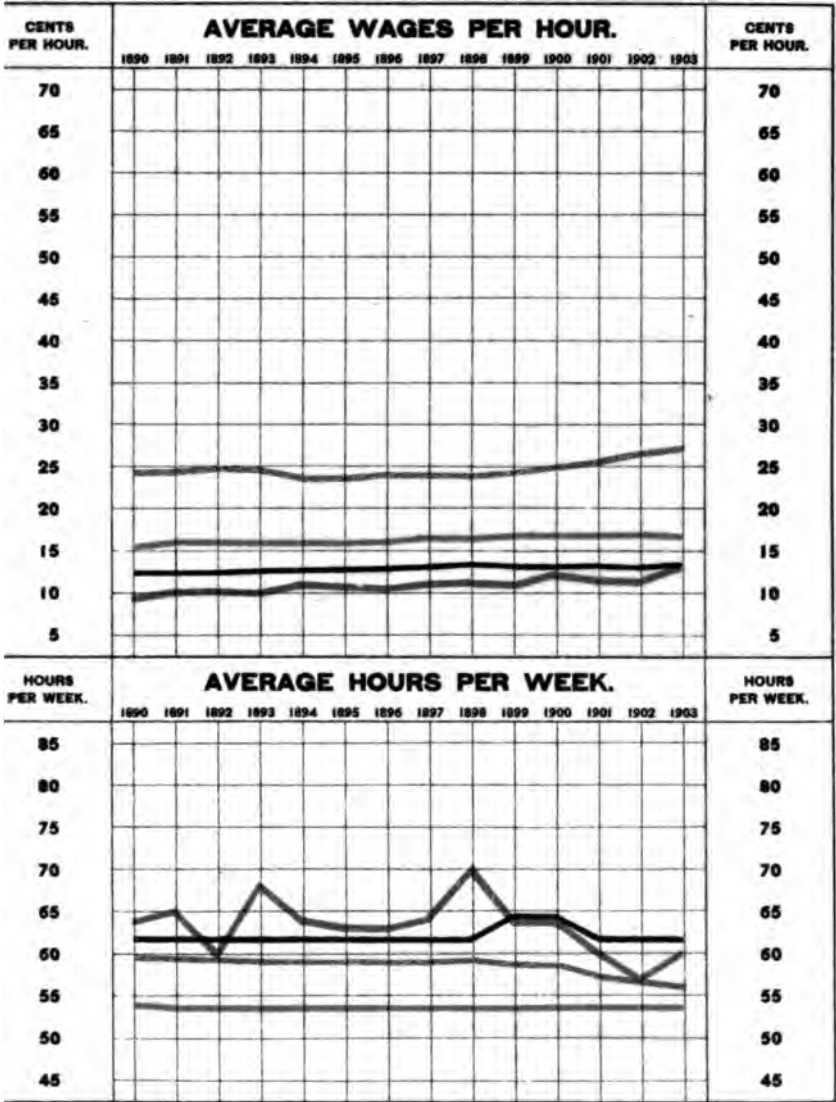


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WAGES AND HOURS OF LABOR: UNITED STATES AND EUROPE-1890 TO 1903. **MACHINISTS.**

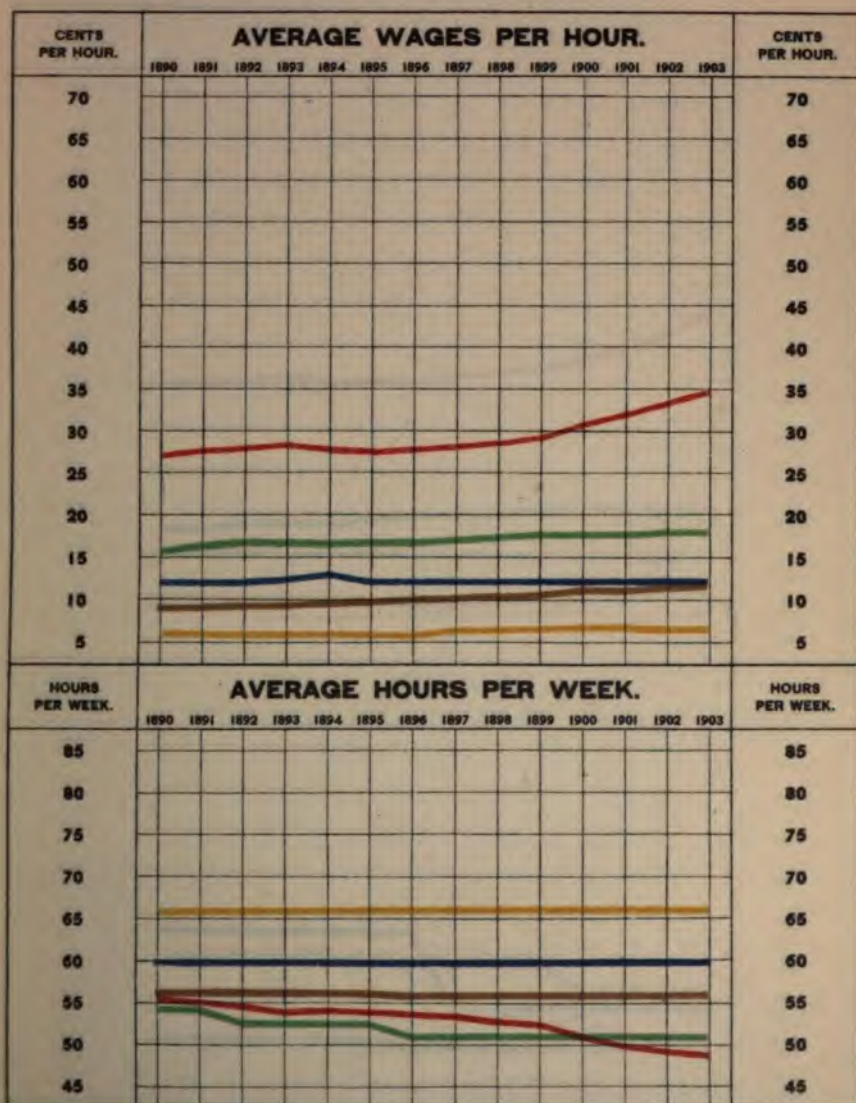


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 (Other symbols represent various European countries as indicated in the original document.)

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WAGES AND HOURS OF LABOR: UNITED STATES AND EUROPE-1890 TO 1903.

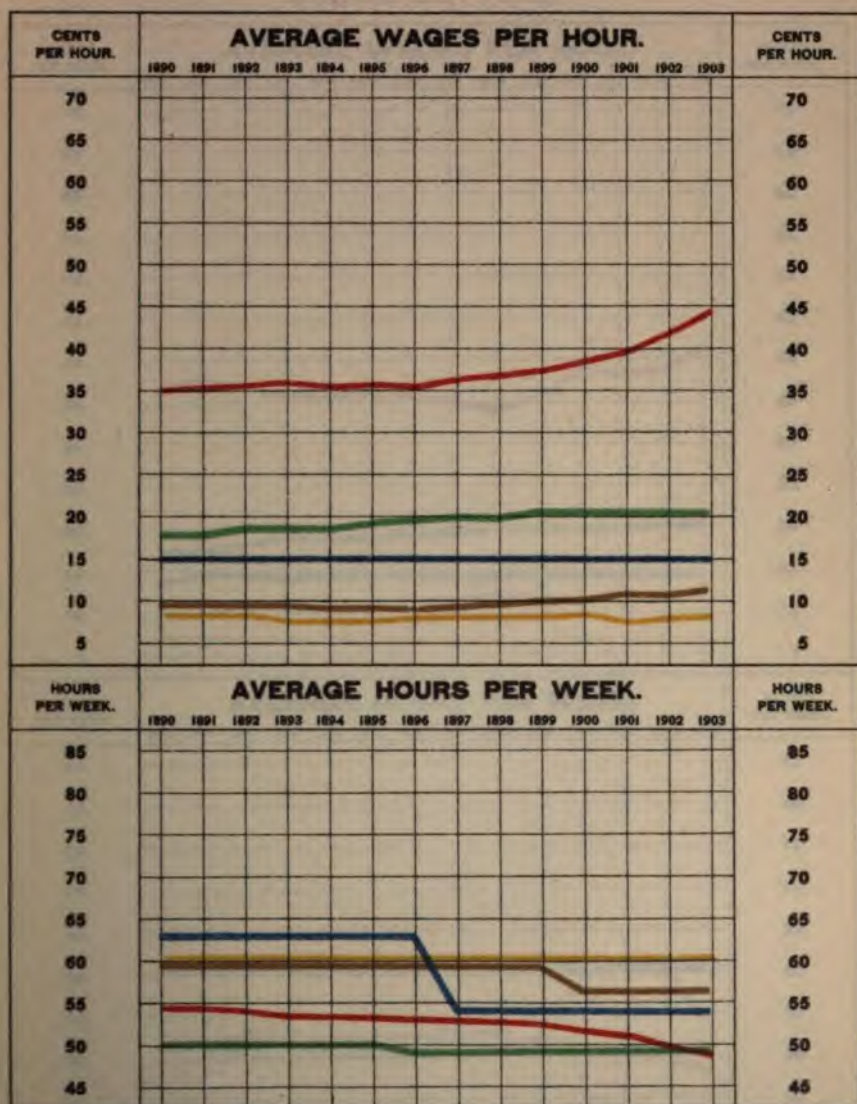
PAINTERS.



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WAGES AND HOURS OF LABOR: UNITED STATES AND EUROPE-1890 TO 1903.

PLUMBERS.



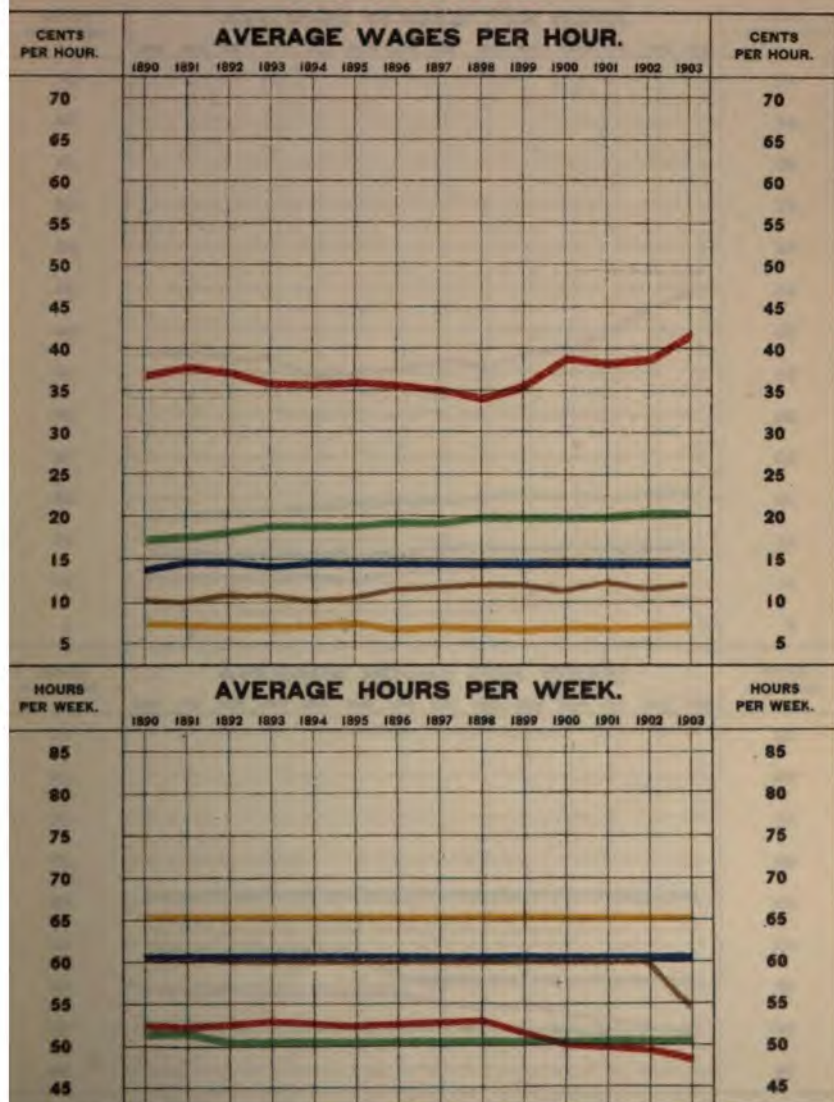
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WAGES AND HOURS OF LABOR: UNITED STATES AND EUROPE-1890 TO 1903.

STONE CUTTERS.

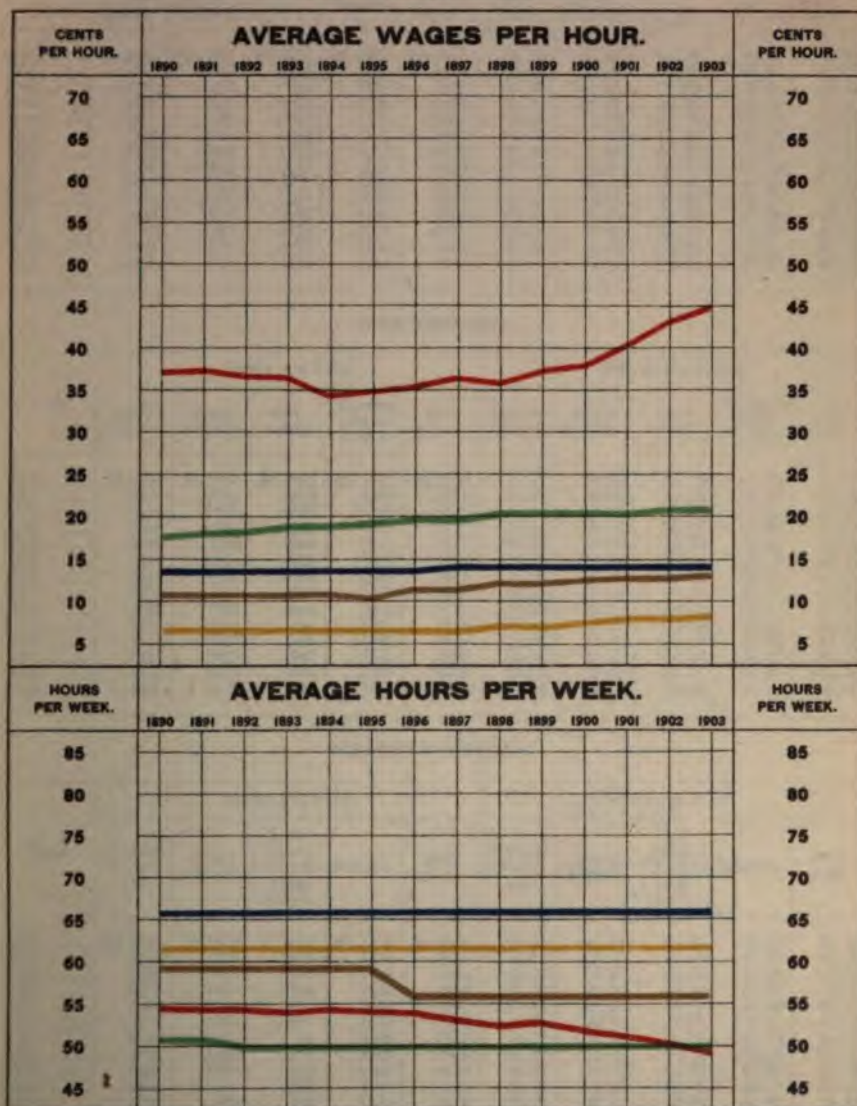


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WAGES AND HOURS OF LABOR: UNITED STATES AND EUROPE-1890 TO 1903.

STONE MASONS.



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WAGES AND HOURS OF LABOR IN LEADING OCCUPATIONS IN THE UNITED STATES AND IN EUROPE, 1890 TO 1903—Continued.

PAINTERS, HOUSE.

Year.	Wages per hour.					Hours per week.				
	United States.	Great Britain.	Germany.	France.	Belgium.	United States.	Great Britain.	Germany.	France.	Belgium.
1890.....	\$0.2680	\$0.1554	\$0.0934	\$0.1231	\$0.0603	55.23	54.33	56.50	60.00	66.00
1891.....	.2712	.1605	.0938	.1231	.0602	54.86	54.33	56.50	60.00	66.00
1892.....	.2747	.1639	.0956	.1231	.0602	54.43	52.67	56.50	60.00	66.00
1893.....	.2796	.1639	.0965	.1255	.0604	53.86	52.67	56.50	60.00	66.00
1894.....	.2737	.1639	.0992	.1313	.0604	54.01	52.67	56.50	60.00	66.00
1895.....	.2720	.1666	.1004	.1255	.0604	53.87	52.67	56.50	60.00	66.00
1896.....	.2742	.1656	.1021	.1255	.0583	53.61	51.00	56.25	60.00	66.00
1897.....	.2778	.1689	.1041	.1255	.0649	53.28	51.00	56.25	60.00	66.00
1898.....	.2827	.1723	.1053	.1255	.0652	52.79	51.00	56.25	60.00	66.00
1899.....	.2892	.1757	.1094	.1255	.0653	52.27	51.00	56.25	60.00	66.00
1900.....	.3054	.1757	.1147	.1255	.0685	50.91	51.00	56.25	60.00	66.00
1901.....	.3170	.1767	.1143	.1255	.0676	49.85	51.00	56.25	60.00	66.00
1902.....	.3303	.1774	.1170	.1255	.0652	49.27	51.00	56.25	60.00	66.00
1903.....	.3450	.1774	.1194	.1255	.0667	48.89	51.00	56.25	60.00	66.00

PLUMBERS.

Year.	Wages per hour.					Hours per week.				
	United States.	Great Britain.	Germany.	France (Paris only).	Belgium.	United States.	Great Britain.	Germany.	France (Paris only).	Belgium.
1890.....	\$0.3464	\$0.1757	\$0.0946	\$0.1501	\$0.0793	54.33	50.00	59.75	63.00	60.00
1891.....	.3486	.1757	.0953	.1501	.0779	54.09	50.00	59.75	63.00	60.00
1892.....	.3511	.1825	.0955	.1501	.0786	53.86	50.00	59.75	63.00	60.00
1893.....	.3552	.1825	.0955	.1501	.0724	53.86	50.00	59.75	63.00	60.00
1894.....	.3515	.1825	.0925	.1501	.0738	53.28	50.00	59.75	63.00	60.00
1895.....	.3546	.1892	.0926	.1501	.0736	53.08	50.00	59.75	63.00	60.00
1896.....	.3571	.1926	.0908	.1501	.0772	52.86	49.17	59.75	63.00	60.00
1897.....	.3598	.1960	.0838	.1501	.0772	52.67	49.17	59.75	64.00	60.00
1898.....	.3638	.1960	.0965	.1501	.0772	52.53	49.17	59.70	64.00	60.00
1899.....	.3684	.2027	.1004	.1501	.0784	52.68	49.17	59.70	64.00	60.00
1900.....	.3811	.2027	.1008	.1501	.0800	51.40	49.17	56.70	64.00	60.00
1901.....	.3935	.2027	.1081	.1501	.0724	50.77	49.17	56.70	64.00	60.00
1902.....	.4184	.2029	.1083	.1501	.0772	49.52	49.17	56.68	64.00	60.00
1903.....	.4429	.2027	.1148	.1501	.0784	48.91	49.17	56.68	64.00	60.00

STONECUTTERS.

Year.	Wages per hour.					Hours per week.				
	United States. (a)	Great Britain.	Germany (Nuremberg only).	France.	Belgium.	United States. (a)	Great Britain.	Germany (Nuremberg only).	France.	Belgium.
1890.....	\$0.3730	\$0.1689	\$0.0985	\$0.1400	\$0.0698	52.73	51.00	60.00	60.00	65.00
1891.....	.3803	.1723	.0978	.1424	.0690	52.54	51.00	60.00	60.00	65.00
1892.....	.3750	.1791	.1042	.1424	.0662	52.70	50.17	59.50	60.00	65.00
1893.....	.3618	.1859	.1052	.1424	.0655	53.12	50.17	59.50	60.00	65.00
1894.....	.3593	.1859	.0992	.1448	.0681	52.84	50.17	59.50	60.00	65.00
1895.....	.3611	.1859	.1027	.1448	.0724	52.67	50.17	59.50	60.00	65.00
1896.....	.3590	.1893	.1116	.1448	.0653	52.77	50.17	59.50	60.00	65.00
1897.....	.3524	.1893	.1129	.1448	.0676	52.99	50.17	59.50	60.00	65.00
1898.....	.3467	.1960	.1164	.1448	.0668	53.04	50.17	59.50	60.00	65.00
1899.....	.3594	.1960	.1166	.1448	.0646	51.70	50.17	59.50	60.00	65.00
1900.....	.3923	.1960	.1104	.1448	.0668	50.20	50.17	59.50	60.00	65.00
1901.....	.3868	.1960	.1188	.1448	.0674	49.96	50.17	59.50	60.00	65.00
1902.....	.3938	.1994	.1126	.1448	.0677	49.67	50.17	59.50	60.00	65.00
1903.....	.4225	.1994	.1177	.1448	.0685	48.67	50.17	54.00	60.00	65.00

^a The wages and hours of labor shown for the United States are for stonecutters, granite, only.

of carpenters in the United States in 1903 were 49.41, those in Great Britain were 50.17; those in Germany 55.30; those in France 60, and those in Belgium 64.73.

It should be remembered that the absolute increase or decrease in wage rates and hours of labor in all industries can not be assumed from the results given in the previous tables and the charts relating thereto. While the figures presented should be considered as relating to the particular occupations covered, it is nevertheless safe to say that they are at least indicative of the general course of wages in all occupations and industries. This is very clearly shown by the results of the extensive investigation begun by the Bureau in the winter of 1900-1901 and just completed. Although the detailed report (the Nineteenth Annual) covering the subject of wages will not be published and available for distribution until early in 1905, a summary statement covering practically all of the leading manufacturing and mechanical industries of the country has appeared in the Bulletin of the Bureau for July, 1904 (No. 53). The number of industries represented there is 67, while the data were secured from a total of 519 distinctive occupations in 3,429 establishments. Bulletin No. 53, which may be had on application to the Commissioner of Labor, covers not only wages, but also hours of labor, number of employees, and cost of living for each year of the period from 1890 to 1903, inclusive. The concrete results of this extensive collection of figures are shown in the following table and explanatory text:

COURSE OF WAGES AND HOURS OF LABOR IN THE UNITED STATES, 1890 TO 1903, WHEN WEIGHTED ACCORDING TO AGGREGATE WAGES PAID IN EACH INDUSTRY AS REPORTED BY THE CENSUS OF 1900.

[Relative numbers computed on basis of average for 1890-1899 = 100.]

Year.	Employees.		Hours per week.		Wages per hour.	
	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.
1890	94.8	+33.4	100.7	-4.1	100.3	+16.0
1891	97.3	+30.0	100.6	-3.9	100.3	+16.0
1892	99.2	+27.5	100.6	-3.9	100.8	+15.4
1893	99.4	+27.3	100.3	-3.7	100.9	+15.3
1894	94.1	+34.4	99.8	-3.2	97.9	+18.6
1895	96.4	+31.2	100.1	-3.5	98.3	+18.3
1896	98.6	+28.3	99.8	-3.2	99.7	+16.6
1897	100.9	+25.4	99.6	-3.0	99.6	+16.8
1898	106.4	+18.9	99.7	-3.1	100.2	+16.1
1899	112.1	+12.8	99.2	-2.6	102.0	+14.0
1900	115.6	+ 9.4	98.7	-2.1	105.5	+10.2
1901	119.1	+ 6.2	98.1	-1.6	108.0	+ 7.7
1902	123.6	+ 2.3	97.3	- .7	112.2	+ 3.7
1903	126.5	(a)	96.6	(a)	116.3	-(a)

a The figures in this column give opposite each year the per cent of increase or decrease (indicated by + or -) which the 1903 figures show as compared with the year specified. Thus, opposite the year 1890, under employees, appears +33.4; this shows that the per cent of increase in the number of employees in 1903 as compared with 1890 was 33.4; opposite 1890, under hours per week, appears -4.1; this shows that the per cent of decrease in the hours of labor per week in 1903 as compared with 1890 was 4.1; in like manner, under wages per hour, appears +16.0; this shows that the per cent of increase in the wages per hour in 1903 as compared with 1890 was 16.0. The figures opposite each year should be read in like manner. Opposite the year 1903, of course, no figures can be placed.

The first column of the table shows the relative number of persons employed in all of the establishments investigated that were in operation during each year of the period. This column probably does not show the full extent of the changes that have taken place in the industries of the United States during the period covered; as just stated, it measures only the changes that have taken place in those establishments that were in operation each year of the period. No figures are known to exist showing the decrease in the number of employees caused by the shutting down of establishments for one or more years of the period, or by the permanent closing of establishments. Neither are there any figures showing the increase in the number of wage-workers caused by the opening of new establishments during these years. The figures in this table relating to employees are of great value, however, for they show the changes that have taken place in a large number of establishments, and undoubtedly indicate to some extent the changes that have taken place in the number of persons employed in all industries throughout the country. The table shows that the lowest number employed was in the year 1894, when 94.1 per cent as many persons were employed as during the average period from 1890 to 1899. The highest point reached in the period covered was in 1903, when 26.4 per cent more persons were employed than the average for the 10-year base period. The next column shows the per cent of increase or decrease in the number of persons employed in 1903 as compared with preceding years. Thus in 1903 there were employed 33.2 per cent more persons than in 1890, 34.3 per cent more than in 1894, and 2.3 per cent more than in 1902, etc. So far as these establishments are concerned it is seen that the number of employees engaged therein have gradually increased since the year 1894. It is seen that in the last year of the period, 1903, a greater number of workmen were employed than in any previous year, and in this last year the number employed was 34.3 per cent greater than in 1894, or more than one-third more.

The next section of the table relates to the hours of labor. The relative number shown is a comparison of the hours of work per week in each year with the average hours worked per week during the 10-year period from 1890 to 1899. In 1890 the hours of work per week were 0.7 per cent more than the average hours worked during the 10-year base period, while in 1903 the hours of work were but 96.6 per cent of the average for the base period; that is, 3.4 per cent less than the average hours worked during the period from 1890 to 1899. The next column shows the per cent of increase or decrease of hours per week in 1903 when compared with previous years; thus in 1903 the hours of work were 4.1 per cent less than in 1890, and 0.7 per cent less than in 1902. The tendency toward a gradual reduction of the hours of labor of the workman is clearly shown here.

The third section of the table relates to the wages per hour paid in all of the industries covered by the report. In 1890 wages were 0.3 per cent higher than the average wages paid during the ten years from 1890 to 1899. In 1891 they were 0.2 per cent higher. The lowest point reached was in 1894, when wages were 97.9 per cent of the average wages for the 10-year period; or, in other words, 2.1 per cent lower than the average for the 10-year period. From 1894 the movement has been gradually upward to 1903, when the average wages per hour were 116.3 per cent of the average for the base period; or, in other words, 16.3 per cent higher than the average wages per hour during the 10-year period, 1890 to 1899. It should be observed that the per cent of change between one year and another is not the result of the subtraction of the two relative numbers. For example: The relative wages in all industries was 97.9 in 1894 and 116.3 in 1903; the difference between these relative numbers is 18.4. The per cent of increase in wages, however, from 1894 to 1903 was not 18.4. This difference, 18.4, is 18.8 per cent of 97.9, the number with which the comparison was made, making wages per hour in 1903 18.8 per cent higher than wages per hour in 1894. The column following the relative wages shows the per cent of increase or decrease in the average wages per hour in 1903 as compared with the preceding years. In this column it is seen that wages per hour in 1903 were 16 per cent higher than in 1890, 15.4 per cent higher than in 1892, 18.8 per cent higher than in 1894, 3.6 per cent higher than in 1902, etc.

A chart embodying the figures contained in the above table and also data as to cost of living during the same period (a discussion of which will be found elsewhere in this Bulletin) forms a part of the exhibit of the Bureau of Labor at the Louisiana Purchase Exposition. A reproduction of this chart (Chart 35) is presented herewith.

COST OF LIVING AND RETAIL PRICES IN THE UNITED STATES.

BY G. W. W. HANGER.

While the Bureau of Labor in 1890 and 1891 in its Sixth and Seventh Annual Reports published data in great detail relative to the cost of living of workingmen's families whose heads were engaged in the iron, steel, coal, coke, iron ore, cotton, woolen, and glass industries, the great changes in economic conditions since these reports were issued rendered this material of little value as the basis for an exhibit of the work of the Bureau along these lines. It was peculiarly fortunate, therefore, that the forthcoming Eighteenth Annual Report became available in sufficient time to permit of its use for this purpose. This report, a summary of which has appeared in the Bulletin of the Bureau of Labor for July, 1904 (No. 53), is the annual report for the year 1903, and presents the results of an investigation prosecuted in every section of our country into the cost of living of workingmen's families and the retail prices of the principal staple articles of food consumed by such families. As stated, this investigation covered two subjects, distinct in character, yet closely allied; that into cost of living covered the year 1901, and its object was to determine the cost of housing, fuel, lighting, food, clothing, etc., in the average workingman's family in the United States, while that into retail prices covered the period from 1890 to 1903 and had for its object the collection of data which would show the extent of increase or decrease in the retail prices of the staple articles of food during the period and thus render it possible to determine, approximately at least, the changes in cost of living in the several years covered.

COST OF LIVING.

In carrying out the investigation, reports of their actual expenditures for a year were secured from 25,440 families residing in the principal industrial localities in 33 States. Among the occupations represented are mechanics of all kinds, railroad employees, common laborers, clerks earning less than \$1,200 per year, etc.

The reports, which were secured directly from the husband or wife, or both, by the personal visits of agents of the Bureau, show the age and sex of the various members of the family; the amount earned by

each member; the family income for the year from all sources; the number of weeks worked during the year by the head of the family; the number of rooms occupied; the amount expended for rent, or, if the house was owned by the occupant and encumbered, the amount paid for interest and on principal; the amounts expended for food, clothing, fuel, lighting, and sundries; also the amount of surplus or deficit at the end of the year.

From 2,567 families reports were secured showing in detail the expenditure for each of the principal articles of food and the quantity consumed; the expenditure for clothing for husband, wife, and children; for taxes; insurance; labor organizations, etc.; religious purposes; furniture; books and newspapers; amusements; liquors; tobacco; medical attendance, etc.; also the disposition of the surplus, if any, and the method of meeting the deficit, if expenditures exceeded income.

The charts on exhibit relating to family conditions and cost of living in 25,440 families present in graphic form some of the most interesting facts disclosed by the investigation. In the list of these charts which follows reference is made by number to the tables which furnish the data for each:

CHARTS RELATING TO 25,440 FAMILIES.

Average size of the families investigated, by geographical divisions and general nativity of head of family (Table 1).

Average size of the families investigated, by nativity of head of family (Table 2).

Per cent of families having an income from children at work, by geographical divisions and general nativity of head of family (Table 3).

Per cent of families having an income from children at work, by nativity of head of family (Table 4).

Per cent of children 5 or under 16 years of age, at work, at school, at work and school, and at home, by geographical divisions and general nativity of head of family (Table 5).

Per cent of children 5 or under 16 years of age, at work, at school, at work and school, and at home, by nativity of head of family (Table 6).

Per cent of wives at work, by geographical divisions and general nativity of head of family (Table 7).

Per cent of wives at work, by nativity of head of family (Table 8).

Per cent of families having boarders or lodgers, by geographical divisions and general nativity of head of family (Table 9).

Per cent of families having boarders or lodgers, by nativity of head of family (Table 10).

Per cent of total income from husbands, wives, children, boarders and lodgers, and other sources, by geographical divisions and general nativity of head of family (Table 11).

Per cent of total income from husbands, wives, children, boarders and lodgers, and other sources, by nativity of head of family (Table 12).

Average income and expenditure per family, by geographical divisions and general nativity of head of family (Table 1).

- Average income and expenditure per family, by nativity of head of family (Table 2).
Per cent of total income expended, by geographical divisions and general nativity of head of family (Table 1).
Per cent of total income expended, by nativity of head of family (Table 2).
Per cent of families reporting a surplus, a deficit, or neither a surplus nor a deficit, by geographical divisions and general nativity of head of family (Table 13).
Per cent of families reporting a surplus, a deficit, or neither a surplus nor a deficit, by nativity of head of family (Table 14).
Average income of husbands at work, by geographical divisions and general nativity (Table 15).
Average income of husbands at work, by nativity (Table 16).
Average income of wives at work, by geographical divisions and general nativity of head of family (Table 17).
Average income of wives at work, by nativity of head of family (Table 18).
Average expenditure per family for food for the year, by geographical divisions and general nativity of head of family (Table 1).
Average expenditure per family for food for the year, by nativity of head of family (Table 2).
Average expenditure per family for rent for the year for families paying rent, by geographical divisions and general nativity of head of family (Table 1).
Average expenditure per family for rent for the year for families paying rent, by nativity of head of family (Table 2).
Average expenditure per family for clothing for the year, by geographical divisions and general nativity of head of family (Table 1).
Average expenditure per family for clothing for the year, by nativity of head of family (Table 2).
Average expenditure per family for fuel for the year, by geographical divisions and general nativity of head of family (Table 1).
Average expenditure per family for fuel for the year, by nativity of head of family (Table 2).
Average expenditure per family for lighting for the year, by geographical divisions and general nativity of head of family (Table 1).
Average expenditure per family for lighting for the year, by nativity of head of family (Table 2).
Average number of rooms per family and per individual, by geographical divisions and general nativity of head of family (Table 19).
Average number of rooms per family and per individual, by nativity of head of family (Table 20).
Per cent of families owning homes, by geographical divisions and general nativity of head of family (Table 21).
Per cent of families owning homes, by nativity of head of family (Table 22).
Per cent of owned homes free from incumbrance, by geographical divisions and general nativity of head of family (Table 21).
Per cent of owned homes free from incumbrance, by nativity of head of family (Table 22).
Per cent of heads of families idle and average weeks idle, by geographical divisions (Table 23).
Per cent of heads of families idle and average weeks idle, by nativity (Table 24).
Per cent of heads of families idle and average weeks idle, by principal causes (Table 25).

It is to be regretted that it is not possible to reproduce in this Bulletin all of the charts relating to cost of living and retail prices exhibited by the Bureau at the Louisiana Purchase Exposition. It is deemed necessary, however, to economize space as much as possible and the charts considered least important will therefore be omitted. Of the 41 charts, the titles of which have been given in the preceding list, a reproduction will be found opposite of that entitled "Per cent of total income from husbands, wives, children, boarders and lodgers, and other sources, by geographical divisions and general nativity of head of family."

The classification of data by geographical divisions as adopted in many of the tables in this article and in the graphic presentations relating thereto is considered both desirable and necessary. The classification of States, so far as they were covered by the investigation of the Bureau, is the same as that used by the United States Census, and is as follows:

North Atlantic States:

Maine.
New Hampshire.
Massachusetts.
Rhode Island.
Connecticut.
New York.
New Jersey.
Pennsylvania.

South Atlantic States:

Delaware.
Maryland.
District of Columbia.
Virginia.
West Virginia.
North Carolina.
South Carolina.
Georgia.

North Central States:

Ohio.
Indiana.
Illinois.
Michigan.
Wisconsin.
Minnesota.
Iowa.
Missouri.
Kansas.

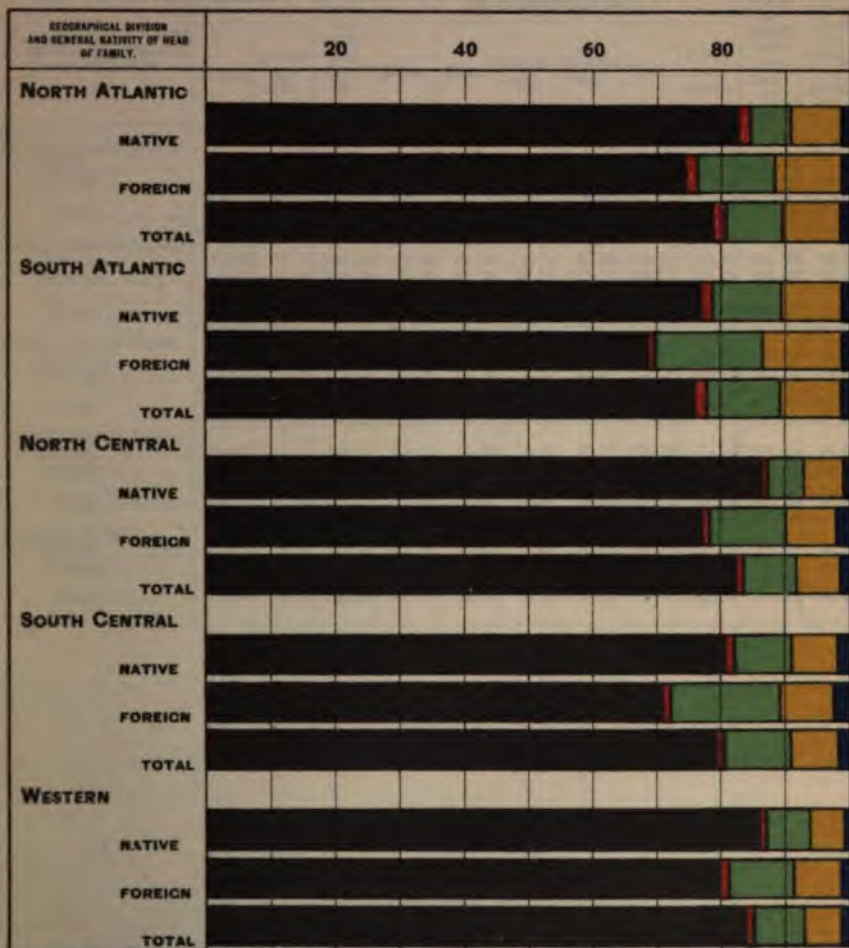
South Central States:

Kentucky.
Tennessee.
Alabama.
Louisiana.
Texas.

Western States:

Colorado.
California.
Washington.

**PER CENT OF TOTAL INCOME FROM HUSBANDS, WIVES, CHILDREN,
BOARDERS AND LODGERS, AND OTHER SOURCES, BY GEOGRAPH-
ICAL DIVISIONS AND GENERAL NATIVITY OF HEAD OF FAMILY.**



[Black square] = FROM HUSBANDS. [Red square] = FROM WIVES. [Green square] = FROM CHILDREN.
 [Orange square] = FROM BOARDERS AND LODGERS. [Blue square] = FROM OTHER SOURCES.

The 25 tables containing the data which form the basis of the 41 charts follow:

TABLE 1.—NUMBER OF FAMILIES, AVERAGE SIZE OF FAMILY, INCOME AND EXPENDITURE PER FAMILY, AND PER CENT OF TOTAL INCOME EXPENDED, BY GEOGRAPHICAL DIVISIONS AND GENERAL NATIVITY OF HEAD OF FAMILY.

[The average shown for each item of expenditure relates to those families only that reported expenditures for such items; the total expenditure per family is for all families.]

Geographical division and general nativity of head of family.	Families.		Total income per family.	Average expenditure of families having an expenditure for—						Total expenditure per family.	Per cent of total income expended.
	Total.	Average size.		Rent.	Fuel.	Lighting.	Clothing.	Food.	Other purposes.		
North Atlantic States:											
Native.....	7,359	4.53	\$748.81	\$130.73	\$30.66	\$7.79	\$93.06	\$306.31	\$135.47	\$696.44	93.01
Foreign.....	6,423	5.11	763.15	123.93	30.33	8.17	94.20	327.49	136.27	713.01	93.48
Total.....	13,782	4.80	755.49	127.63	30.51	7.97	93.60	316.18	135.84	704.16	93.21
South Atlantic States:											
Native.....	1,995	5.11	683.06	97.95	30.54	6.12	86.08	289.09	142.42	641.80	93.96
Foreign.....	198	5.68	768.75	107.20	31.12	6.85	103.11	354.07	152.11	734.55	95.55
Total.....	2,193	5.16	690.80	98.68	30.60	6.19	87.62	294.96	143.30	650.18	94.12
North Central States:											
Native.....	4,227	4.68	756.82	107.62	30.48	7.50	96.81	308.09	171.28	713.63	94.29
Foreign.....	3,113	5.39	744.55	100.23	36.30	7.45	99.36	328.90	149.28	702.42	94.34
Total.....	7,340	4.98	751.62	105.02	32.95	7.48	97.89	316.92	161.95	708.88	94.31
South Central States:											
Native.....	1,027	5.21	670.64	94.21	23.86	4.96	87.11	278.33	153.45	635.74	94.80
Foreign.....	194	5.26	700.78	103.19	24.95	5.05	93.98	294.76	172.19	665.33	94.95
Total.....	1,221	5.22	675.42	95.38	24.04	4.97	88.20	280.94	156.43	640.44	94.82
Western States:											
Native.....	553	3.96	883.14	148.86	34.69	8.07	118.21	311.18	142.30	741.75	83.99
Foreign.....	351	4.42	883.78	144.78	35.09	8.25	121.95	327.77	152.20	748.59	84.70
Total.....	904	4.14	883.39	147.48	34.84	8.14	119.66	317.62	146.14	744.41	84.27

TABLE 2.—NUMBER OF FAMILIES, AVERAGE SIZE OF FAMILY, INCOME AND EXPENDITURE PER FAMILY, AND PER CENT OF TOTAL INCOME EXPENDED, BY NATIVITY OF HEAD OF FAMILY.

[The average shown for each item of expenditure relates to those families only that reported expenditures for such items; the total expenditure per family is for all families.]

Nativity of head of family.	Families.		Total income per family.	Average expenditure of families having an expenditure for—						Total expenditure per family.	Per cent of total income expended.
	Total.	Average size.		Rent.	Fuel.	Lighting.	Clothing.	Food.	Other purposes.		
United States.....	15,161	4.67	\$742.00	\$118.54	\$30.23	\$7.31	\$93.71	\$302.82	\$147.84	\$691.58	93.20
Austria-Hungary.....	283	5.04	674.43	96.22	32.19	7.21	87.53	313.48	114.82	646.88	95.92
Canada.....	1,012	5.16	793.26	115.38	32.30	8.34	101.57	325.70	139.69	720.51	90.83
Denmark.....	103	5.05	758.80	116.04	34.17	8.58	99.27	311.38	142.25	688.71	90.76
England.....	930	4.90	822.04	128.46	33.40	8.42	106.65	337.08	152.00	754.07	91.73
France.....	86	4.95	749.97	130.67	33.19	7.58	95.95	309.36	158.25	706.80	94.18
Germany.....	2,883	5.24	745.37	117.20	32.51	7.45	98.69	324.27	147.23	702.94	94.31
Ireland.....	2,983	5.26	774.73	121.63	31.36	8.05	95.77	341.14	140.59	726.25	93.74
Italy.....	256	5.02	611.19	98.85	27.49	6.79	68.68	271.16	100.19	566.85	92.75
Netherlands.....	104	5.72	675.12	83.89	38.41	7.77	86.67	276.00	123.64	604.97	89.61
Norway.....	164	5.32	762.30	110.11	33.98	8.20	100.85	324.50	145.22	715.80	98.90
Russia.....	443	5.70	661.92	105.39	31.87	7.76	83.83	316.73	117.41	655.06	98.96
Scotland.....	251	5.08	857.46	124.21	32.15	8.62	106.38	339.20	176.35	782.87	91.30
Sweden.....	502	4.78	766.15	125.20	33.56	7.99	91.88	320.14	142.16	708.32	92.45
Switzerland.....	57	4.88	774.24	129.86	34.42	7.33	92.85	314.39	155.20	716.67	92.56
Wales.....	119	5.26	803.30	120.15	32.44	6.75	111.04	336.83	144.56	730.05	90.88
Other foreign.....	113	4.84	710.76	122.59	31.06	8.08	86.48	304.82	134.60	682.49	96.02
Total foreign.....	10,279	5.18	760.57	118.16	32.21	7.87	96.88	327.82	141.73	710.53	93.42
United States and foreign.....	25,440	4.88	749.50	118.40	31.06	7.53	94.99	312.92	145.37	699.24	93.29

TABLE 3.—PER CENT OF FAMILIES HAVING AN INCOME FROM CHILDREN AT WORK, BY GEOGRAPHICAL DIVISIONS AND GENERAL NATIVITY OF HEAD OF FAMILY.

Geographical division and general nativity of head of family.	Per cent of families.
North Atlantic States:	
Native.....	17.31
Foreign.....	26.61
Total.....	21.64
South Atlantic States:	
Native.....	27.42
Foreign.....	40.40
Total.....	28.59
North Central States:	
Native.....	16.82
Foreign.....	28.85
Total.....	21.92
South Central States:	
Native.....	22.01
Foreign.....	36.08
Total.....	24.24
Western States:	
Native.....	12.66
Foreign.....	16.81
Total.....	14.27

TABLE 4.—PER CENT OF FAMILIES HAVING AN INCOME FROM CHILDREN AT WORK, BY NATIVITY OF HEAD OF FAMILY.

Nativity of head of family.	Per cent of families.	Nativity of head of family.	Per cent of families.
United States	18.65	Norway	18.18
Austria-Hungary	22.25	Russia	22.80
Canada	23.02	Scotland	23.51
Denmark	17.48	Sweden	10.76
England	23.55	Switzerland	29.82
France	18.60	Wales	85.29
Germany	33.58	Other foreign	20.85
Ireland	30.31	Total foreign	27.40
Italy	16.02	United States and foreign	22.19
Netherlands	28.85		

TABLE 5.—PER CENT OF CHILDREN 5 OR UNDER 16 YEARS OF AGE AT WORK, AT SCHOOL, AT WORK AND AT SCHOOL, AND AT HOME, BY GEOGRAPHICAL DIVISIONS AND GENERAL NATIVITY OF HEAD OF FAMILY.

Geographical division and general nativity of head of family.	At work.	At school.	At work and at school.	At home.	All children.
North Atlantic States:					
Native	3.60	76.50	0.50	19.40	100.0
Foreign	4.60	78.67	.36	16.37	100.0
Total	4.11	77.62	.43	17.84	100.0
South Atlantic States:					
Native	12.00	61.57	1.35	25.08	100.0
Foreign	8.09	77.02	.65	14.24	100.0
Total	11.59	63.17	1.28	23.96	100.0
North Central States:					
Native	2.53	79.24	.82	17.41	100.0
Foreign	4.36	78.42	.99	16.23	100.0
Total	3.43	78.83	.91	16.83	100.0
South Central States:					
Native	8.20	62.24	1.11	28.45	100.0
Foreign	8.86	69.15		21.99	100.0
Total	8.31	63.31	.93	27.45	100.0
Western States:					
Native	1.28	82.94	.18	15.60	100.0
Foreign	.98	82.27	.25	16.50	100.0
Total	1.16	82.65	.21	15.98	100.0

TABLE 6.—PER CENT OF CHILDREN 5 OR UNDER 16 YEARS OF AGE AT WORK, AT SCHOOL, AT WORK AND AT SCHOOL, AND AT HOME, BY NATIVITY OF HEAD OF FAMILY.

Nativity of head of family.	At work.	At school.	At work and at school.	At home.	All children.
United States.....	4.80	74.17	0.75	20.28	100.0
Austria-Hungary.....	6.78	72.11	.25	20.86	100.0
Canada.....	4.18	81.64	.65	13.73	100.0
Denmark.....	2.87	77.01	.58	19.54	100.0
England.....	4.16	78.66	.94	16.34	100.0
France.....	2.86	78.09	.....	19.06	100.0
Germany.....	5.32	77.92	.78	15.98	100.0
Ireland.....	4.88	79.69	.42	15.51	100.0
Italy.....	3.96	76.38	.61	20.06	100.0
Netherlands.....	1.23	82.64	.....	13.23	100.0
Norway.....	1.44	80.93	.....	17.63	100.0
Russia.....	5.27	70.95	.26	23.52	100.0
Scotland.....	3.48	81.28	.27	14.97	100.0
Sweden.....	1.74	80.00	.29	17.97	100.0
Switzerland.....	4.71	89.41	.....	5.88	100.0
Wales.....	8.46	73.02	1.59	16.93	100.0
Other foreign.....	6.00	73.34	1.33	19.33	100.0
Total foreign.....	4.57	78.47	.57	16.39	100.0
United States and foreign.....	4.70	76.10	.67	18.53	100.0

TABLE 7.—PER CENT OF WIVES AT WORK, BY GEOGRAPHICAL DIVISIONS AND GENERAL NATIVITY OF HEAD OF FAMILY.

Geographical division and general nativity of head of family.	Per cent of wives at work.
North Atlantic States:	
Native.....	9.04
Foreign.....	9.44
Total.....	9.23
South Atlantic States:	
Native.....	14.50
Foreign.....	10.88
Total.....	14.17
North Central States:	
Native.....	5.99
Foreign.....	6.38
Total.....	6.16
South Central States:	
Native.....	12.52
Foreign.....	8.95
Total.....	11.96
Western States:	
Native.....	4.00
Foreign.....	2.33
Total.....	3.36

TABLE 8.—PER CENT OF WIVES AT WORK, BY NATIVITY OF HEAD OF FAMILY.

Nativity of head of family.	Percent of wives at work.	Nativity of head of family.	Percent of wives at work.
United States	8.95	Norway	4.61
Austria-Hungary	7.12	Russia	8.66
Canada	5.13	Scotland	6.50
Denmark	8.74	Sweden	6.07
England	6.30	Switzerland	8.77
France	13.10	Wales	1.71
Germany	9.86	Other foreign	13.39
Ireland	9.33	Total foreign	8.29
Italy	9.06	United States and foreign	8.68
Netherlands	.99		

TABLE 9.—PER CENT OF FAMILIES HAVING BOARDERS OR LODGERS, BY GEOGRAPHICAL DIVISIONS AND GENERAL NATIVITY OF HEAD OF FAMILY.

Geographical division and general nativity of head of family.	Per cent of families having boarders or lodgers.
North Atlantic States:	
Native	21.78
Foreign	25.38
Total	23.46
South Atlantic States:	
Native	27.67
Foreign	35.86
Total	28.41
North Central States:	
Native	19.54
Foreign	25.67
Total	22.14
South Central States:	
Native	24.05
Foreign	23.20
Total	23.91
Western States:	
Native	14.29
Foreign	18.80
Total	16.04

TABLE 10.—PER CENT OF FAMILIES HAVING BOARDERS OR LODGERS, BY NATIVITY OF HEAD OF FAMILY.

Nativity of head of family.	Percent of families having boarders or lodgers.	Nativity of head of family.	Per cent of families having boarders or lodgers.
United States	21.15	Norway	19.45
Austria-Hungary	17.31	Russia	23.02
Canada	26.58	Scotland	23.51
Denmark	15.53	Sweden	23.31
England	25.38	Switzerland	24.56
France	29.07	Wales	26.05
Germany	23.00	Other foreign	24.78
Ireland	29.84	Total foreign	25.40
Italy	20.31	United States and foreign	23.26
Netherlands	28.85		

TABLE 11.—PER CENT OF TOTAL INCOME FROM HUSBANDS, WIVES, CHILDREN, BOARDERS AND LODGERS, AND OTHER SOURCES, BY GEOGRAPHICAL DIVISIONS AND GENERAL NATIVITY OF HEAD OF FAMILY.

Geographical division and general nativity of head of family.	Per cent of total income from—					Total.
	Husbands.	Wives.	Children.	Boarders and lodgers.	Other sources.	
North Atlantic States:						
Native.....	82.31	1.73	7.03	7.06	1.87	100.0
Foreign.....	74.11	1.77	12.39	10.01	1.72	100.0
Total.....	78.45	1.75	9.55	8.45	1.80	100.0
South Atlantic States:						
Native.....	76.30	1.94	11.00	9.08	1.68	100.0
Foreign.....	68.14	1.65	16.60	11.98	1.63	100.0
Total.....	75.48	1.91	11.56	9.37	1.66	100.0
North Central States:						
Native.....	85.93	.80	6.27	5.63	1.37	100.0
Foreign.....	76.74	.96	12.22	7.80	2.28	100.0
Total.....	82.07	.87	8.77	6.54	1.75	100.0
South Central States:						
Native.....	80.32	1.67	9.37	6.61	2.03	100.0
Foreign.....	70.65	1.27	17.27	7.86	2.95	100.0
Total.....	78.73	1.60	10.67	6.82	2.18	100.0
Western States:						
Native.....	85.80	1.02	7.26	4.71	1.21	100.0
Foreign.....	80.08	.61	10.62	7.15	1.54	100.0
Total.....	83.58	.86	8.57	5.65	1.34	100.0

TABLE 12.—PER CENT OF TOTAL INCOME FROM HUSBANDS, WIVES, CHILDREN, BOARDERS AND LODGERS, AND OTHER SOURCES, BY NATIVITY OF HEAD OF FAMILY.

Nativity of head of family.	Per cent of total income from—					Total.
	Husbands.	Wives.	Children.	Boarders and lodgers.	Other sources.	
United States.....	82.64	1.46	7.45	6.77	1.68	100.0
Austria-Hungary.....	78.09	1.65	10.96	6.49	2.81	100.0
Canada.....	76.31	1.05	9.92	10.70	2.02	100.0
Denmark.....	85.00	2.55	5.09	4.99	2.37	100.0
England.....	79.81	1.01	8.63	8.70	1.85	100.0
France.....	77.65	2.80	8.28	10.18	1.09	100.0
Germany.....	74.88	1.65	14.44	7.23	1.80	100.0
Ireland.....	68.69	1.61	15.75	12.05	1.90	100.0
Italy.....	81.27	1.76	8.50	6.83	1.64	100.0
Netherlands.....	76.85	.74	11.96	8.95	1.50	100.0
Norway.....	84.49	1.27	6.44	5.95	1.85	100.0
Russia.....	79.45	1.75	10.05	7.25	1.49	100.0
Scotland.....	76.39	.89	12.23	8.66	1.83	100.0
Sweden.....	84.49	1.02	3.50	8.18	2.81	100.0
Switzerland.....	78.30	1.82	10.21	8.83	.84	100.0
Wales.....	75.27	.34	13.67	9.90	.82	100.0
Other foreign.....	81.80	3.19	7.14	5.95	1.92	100.0
Total foreign.....	74.95	1.47	12.43	9.25	1.90	100.0
United States and foreign.....	79.49	1.47	9.49	7.78	1.77	100.0

TABLE 13.—PER CENT OF FAMILIES REPORTING A SURPLUS, A DEFICIT, OR NEITHER A SURPLUS NOR A DEFICIT, BY GEOGRAPHICAL DIVISIONS AND GENERAL NATIVITY OF HEAD OF FAMILY.

Geographical division and general nativity of head of family.	Per cent of families reporting—		
	Surplus.	Deficit.	Neither surplus nor deficit.
North Atlantic States:			
Native	55.38	16.18	28.44
Foreign	51.44	17.28	31.28
Total	53.54	16.70	29.76
South Atlantic States:			
Native	41.25	19.60	39.15
Foreign	30.30	23.23	46.47
Total	40.26	19.93	39.81
North Central States:			
Native	45.90	12.51	41.59
Foreign	42.95	17.83	39.22
Total	44.64	14.77	40.59
South Central States:			
Native	45.67	22.10	32.23
Foreign	33.51	17.01	49.48
Total	43.74	21.29	34.97
Western States:			
Native	83.72	3.44	12.84
Foreign	79.77	4.56	15.67
Total	82.19	3.87	13.94

TABLE 14.—PER CENT OF FAMILIES REPORTING A SURPLUS, A DEFICIT, OR NEITHER A SURPLUS NOR A DEFICIT, BY NATIVITY OF HEAD OF FAMILY.

Nativity of head of family.	Per cent of families reporting—		
	Surplus.	Deficit.	Neither surplus nor deficit.
United States	51.25	15.55	33.20
Austria-Hungary	40.99	25.79	33.22
Canada	60.67	11.86	27.47
Denmark	58.25	12.62	29.13
England	56.67	16.02	27.31
France	47.67	15.12	37.21
Germany	43.70	16.82	39.48
Ireland	48.41	18.50	33.09
Italy	53.52	20.70	25.78
Netherlands	55.77	21.15	23.08
Norway	50.65	15.58	33.77
Russia	32.96	25.96	41.08
Scotland	62.96	14.84	22.71
Sweden	62.19	11.36	36.45
Switzerland	45.61	12.28	42.11
Wales	56.30	19.33	24.37
Other foreign	46.02	15.93	38.05
Total foreign	49.09	17.12	33.79
United States and foreign	50.38	16.18	33.44

TABLE 19.—AVERAGE NUMBER OF ROOMS PER FAMILY AND PER INDIVIDUAL, BY GEOGRAPHICAL DIVISIONS AND GENERAL NATIVITY OF HEAD OF FAMILY.

Geographical division and general nativity of head of family.	Rooms per family.	Rooms per individual.
North Atlantic States:		
Native.....	5.37	1.21
Foreign.....	5.02	1.01
Total.....	5.21	1.11
South Atlantic States:		
Native.....	4.75	.97
Foreign.....	5.36	.96
Total.....	4.81	.97
North Central States:		
Native.....	4.46	.97
Foreign.....	5.12	.98
Total.....	4.74	.98
South Central States:		
Native.....	3.75	.74
Foreign.....	4.07	.78
Total.....	3.80	.75
Western States:		
Native.....	4.66	1.19
Foreign.....	4.77	1.11
Total.....	4.70	1.16

TABLE 20.—AVERAGE NUMBER OF ROOMS PER FAMILY AND PER INDIVIDUAL, BY NATIVITY OF HEAD OF FAMILY.

Nativity of head of family.	Rooms per family.	Rooms per individual.
United States.....	4.90	1.08
Austria-Hungary.....	4.16	.85
Canada.....	5.60	1.10
Denmark.....	5.24	1.07
England.....	5.39	1.13
France.....	4.86	1.00
Germany.....	4.90	.95
Ireland.....	5.03	.99
Italy.....	3.67	.77
Netherlands.....	5.76	1.05
Norway.....	5.28	1.02
Russia.....	4.43	.81
Scotland.....	5.39	1.08
Sweden.....	5.03	1.11
Switzerland.....	5.18	1.10
Wales.....	5.51	1.05
Other foreign.....	4.76	1.04
Total foreign.....	5.08	1.00
United States and foreign.....	4.95	1.04

TABLE 21.—PER CENT OF FAMILIES OWNING HOMES AND PER CENT OF OWNED HOMES FREE FROM INCUMBRANCE, BY GEOGRAPHICAL DIVISIONS AND GENERAL NATIVITY OF HEAD OF FAMILY.

Geographical division and general nativity of head of family.	Percent of families owning homes.	Percent of owned homes free from incumbrance.
North Atlantic States:		
Native.....	11.65	55.66
Foreign.....	15.29	51.93
Total.....	13.34	53.67
South Atlantic States:		
Native.....	18.50	63.96
Foreign.....	30.30	41.67
Total.....	19.56	60.84
North Central States:		
Native.....	18.41	57.20
Foreign.....	39.99	50.36
Total.....	27.56	52.99
South Central States:		
Native.....	18.01	64.32
Foreign.....	35.57	81.16
Total.....	20.80	64.90
Western States:		
Native.....	25.14	70.50
Foreign.....	40.17	78.01
Total.....	30.97	74.29

TABLE 22.—PER CENT OF OWNED HOMES FREE FROM INCUMBRANCE, BY NATIVITY OF HEAD OF FAMILY.

Nativity of head of family.	Percent of families owning homes.	Percent of owned homes free from incumbrance.
United States	15.36	59.06
Austria-Hungary	17.81	57.14
Canada	15.22	40.91
Denmark	34.95	58.33
England	19.89	58.92
France	25.58	77.27
Germany	32.33	56.97
Ireland	21.56	56.30
Italy	11.72	66.67
Netherlands	46.15	29.17
Norway	38.96	16.67
Russia	16.03	43.66
Scotland	19.12	54.17
Sweden	32.27	36.42
Switzerland	26.32	53.33
Wales	27.73	69.70
Other foreign	7.96	66.67
Total foreign.....	24.29	53.18
United States and foreign.....	18.97	56.02

TABLE 23.—PER CENT OF HEADS OF FAMILIES IDLE AND AVERAGE WEEKS IDLE, BY GEOGRAPHICAL DIVISIONS.

Geographical division.	Per cent idle.	Average weeks idle based on those idle.	Average weeks idle based on total heads of families.
North Atlantic States	49.30	9.59	4.73
South Atlantic States	51.71	9.01	4.66
North Central States	48.42	8.88	4.28
South Central States	74.98	9.22	6.91
Western States	30.85	11.33	3.50
Total	49.81	9.43	4.70

TABLE 24.—PER CENT OF HEADS OF FAMILIES IDLE AND AVERAGE WEEKS IDLE, BY NATIVITY.

Nativity.	Per cent idle.	Average weeks idle based on those idle.	Average weeks idle based on total heads of families.
United States	48.09	9.00	4.33
Austria-Hungary	57.66	9.05	5.22
Canada	39.78	9.50	3.78
Denmark	49.49	7.94	3.93
England	51.10	10.42	5.33
France	58.83	11.94	6.97
Germany	54.50	9.45	5.15
Ireland	51.41	10.87	5.50
Italy	65.60	10.71	7.08
Netherlands	68.27	8.29	5.66
Norway	54.61	8.29	4.53
Russia	66.90	11.22	7.51
Scotland	50.62	10.98	5.56
Sweden	42.28	8.95	3.73
Switzerland	68.52	7.66	5.25
Wales	64.96	10.28	6.68
Other foreign	53.21	8.74	4.65
Total foreign	52.35	10.04	5.26
United States and foreign	49.81	9.43	4.70

TABLE 25.—PER CENT OF HEADS OF FAMILIES IDLE AND AVERAGE WEEKS IDLE, BY PRINCIPAL CAUSES.

Cause of idleness.	Per cent idle based on total heads of families	Per cent idle based on those idle.	Average weeks idle.
Accident	0.83	1.66	8.98
Bad weather	1.12	2.25	9.32
Establishment closed	2.14	4.30	8.58
Sickness	11.22	22.54	7.71
Sickness and establishment closed	.46	.95	11.91
Sickness and slack work	.83	1.67	10.33
Sickness and unable to get work	1.84	3.70	14.15
Sickness and vacation	.55	1.11	5.32
Slack work	6.50	13.05	9.79
Strike	1.03	2.07	9.65
Unable to get work	16.58	33.29	10.90
Vacation	3.21	6.45	2.61

The charts on exhibit relating to the cost of living in the 2,567 families which reported their expenditures in detail are given in the following list, reference being made by number in each case to the table which furnishes the data forming the basis for the graphic presentation:

CHARTS RELATING TO 2,567 FAMILIES WHICH REPORTED EXPENDITURES IN DETAIL.

Average cost per family of certain articles of food consumed in 1901, by geographical divisions (Table 26).

Average cost per family of certain articles of food consumed in 1901, for the United States (Table 26).

Average expenditure per family for various purposes in 1901, by geographical divisions (Table 27).

Average expenditure per family for various purposes in 1901, for the United States (Table 27).

Average cost of food per family each year, 1890 to 1903, by geographical divisions (Table 28).

Average cost of food per family each year, 1890 to 1903, for the United States (Table 28).

Of the above six charts the second, fourth, and sixth are reproduced herewith and are numbered, respectively, 37, 38, and 39. The three tables which follow contain the data upon which the six charts were based.

TABLE 26.—AVERAGE COST PER FAMILY OF CERTAIN ARTICLES OF FOOD CONSUMED IN 1901, BY GEOGRAPHICAL DIVISIONS AND FOR THE UNITED STATES.

Article.	North Atlantic States (1,415 families).	South Atlantic States (219 families).	North Central States (721 families).	South Central States (122 families).	Western States (90 families).	United States (2,567 families).
Fresh beef	\$54.27	\$41.08	\$16.06	\$37.84	\$54.13	\$50.05
Salt beef	8.18	1.13	2.20	.33	.66	5.26
Fresh pork	12.83	10.48	18.39	15.60	4.04	14.02
Salt pork	12.19	26.79	11.25	28.09	11.06	13.89
Poultry	10.18	8.44	9.34	5.93	7.15	9.49
Fish	10.06	5.21	5.67	3.95	6.90	8.01
Other meat	12.26	3.86	8.68	1.40	5.35	9.78
Flour, meal, and bread	31.65	30.44	24.58	32.23	20.78	29.20
Rice	1.94	2.77	1.92	3.70	.91	2.05
Potatoes	13.77	9.29	13.01	11.54	9.84	12.93
Other vegetables	16.08	20.75	22.03	16.62	35.41	18.85
Eggs	18.44	15.55	15.24	13.20	11.01	16.79
Milk	24.29	13.02	19.67	12.25	20.46	21.32
Butter	29.77	25.76	28.48	21.74	31.81	28.76
Cheese	2.56	2.65	2.87	3.36	.69	2.62
Lard	8.15	12.72	10.34	14.31	5.41	9.35
Molasses	1.51	2.01	1.53	2.93	3.28	1.69
Sugar	16.67	14.15	14.63	15.70	14.49	15.76
Coffee	9.70	10.68	12.91	12.22	8.06	10.74
Tea	6.33	4.40	4.22	2.69	3.43	5.30
Fruit	15.31	15.22	17.15	11.52	40.53	16.62
Vinegar, pickles, and condiments	4.06	3.21	4.80	4.41	1.49	4.12
Other food	17.91	19.13	26.63	21.12	11.61	20.40
Total	338.10	298.64	321.60	292.68	308.53	326.90

TABLE 27.—AVERAGE EXPENDITURE PER FAMILY FOR VARIOUS PURPOSES IN 1901, BY GEOGRAPHICAL DIVISIONS AND FOR THE UNITED STATES.

Expenditure for—	North Atlantic States.			South Atlantic States.			North Central States.		
	Per cent of families having an expenditure.	Average per family, based on families having an expenditure.	Average per family, based on all families.	Per cent of families having an expenditure.	Average per family, based on families having an expenditure.	Average per family, based on all families.	Per cent of families having an expenditure.	Average per family, based on families having an expenditure.	Average per family, based on all families.
Food	100.00	\$338.10	\$338.10	100.00	\$298.64	\$298.64	100.00	\$321.60	\$321.60
Rent	87.70	131.34	115.19	75.80	98.03	74.31	70.18	114.16	80.12
Mortgage:									
Principal	3.18	^a 145.89	64.86	6.85	110.88	7.59	9.71	^a 152.10	614.61
Interest	5.51	^a 75.02	^c 3.82	9.59	36.50	3.50	13.31	^a 43.57	^c 5.44
Fuel	100.00	31.79	31.79	100.00	32.52	32.52	100.00	33.98	33.98
Lighting	100.00	8.81	8.81	100.00	6.41	6.41	100.00	8.01	8.01
Clothing:									
Husband	98.37	34.18	33.62	95.43	31.79	30.34	98.61	35.99	35.49
Wife	98.52	27.18	26.77	98.63	22.79	22.47	99.17	25.73	25.52
Children	86.64	51.86	44.98	85.84	51.94	44.59	93.62	58.04	54.34
Taxes	32.44	15.14	4.91	37.44	16.22	6.07	35.51	21.75	7.72
Insurance:									
Property	29.12	4.16	1.21	27.40	4.62	1.27	36.34	5.63	2.04
Life	67.21	29.74	19.99	68.49	32.00	21.92	66.44	28.94	19.22
Organizations:									
Labor	39.15	9.55	3.74	19.63	8.75	1.72	37.45	10.22	3.83
Other	51.59	11.90	6.14	36.53	11.43	4.18	34.40	11.91	4.10
Religion	82.97	9.81	8.14	77.17	8.55	6.59	77.89	8.83	6.83
Charity	44.95	4.61	2.07	56.62	4.30	2.44	57.84	4.53	2.62
Furniture and utensils	87.92	34.44	30.28	69.41	30.74	21.33	83.91	26.90	22.57
Books and newspapers	96.89	8.45	8.19	79.45	6.87	5.46	96.26	9.69	9.33
Amusements and vacation	77.46	14.96	11.59	54.79	14.58	7.99	63.66	24.99	15.91
Intoxicating liquors	53.50	23.72	12.69	46.58	19.48	9.07	49.38	30.38	15.00
Tobacco	81.48	12.34	10.05	79.00	11.79	9.31	76.42	18.19	13.90
Sickness and death	74.42	25.77	19.18	83.11	28.83	23.96	81.41	28.27	23.02
Other purposes	99.43	32.15	31.97	93.15	63.28	58.94	99.45	61.08	60.75

^a Not including payments made by 6 families in which principal and interest were combined.^b Including interest paid by 6 families.^c Not including interest paid by 6 families, included in principal.

AVERAGE COST PER FAMILY OF CERTAIN ARTICLES OF FOOD CONSUMED IN 1901, FOR THE UNITED STATES.

[FROM REPORTS OF 2567 FAMILIES].

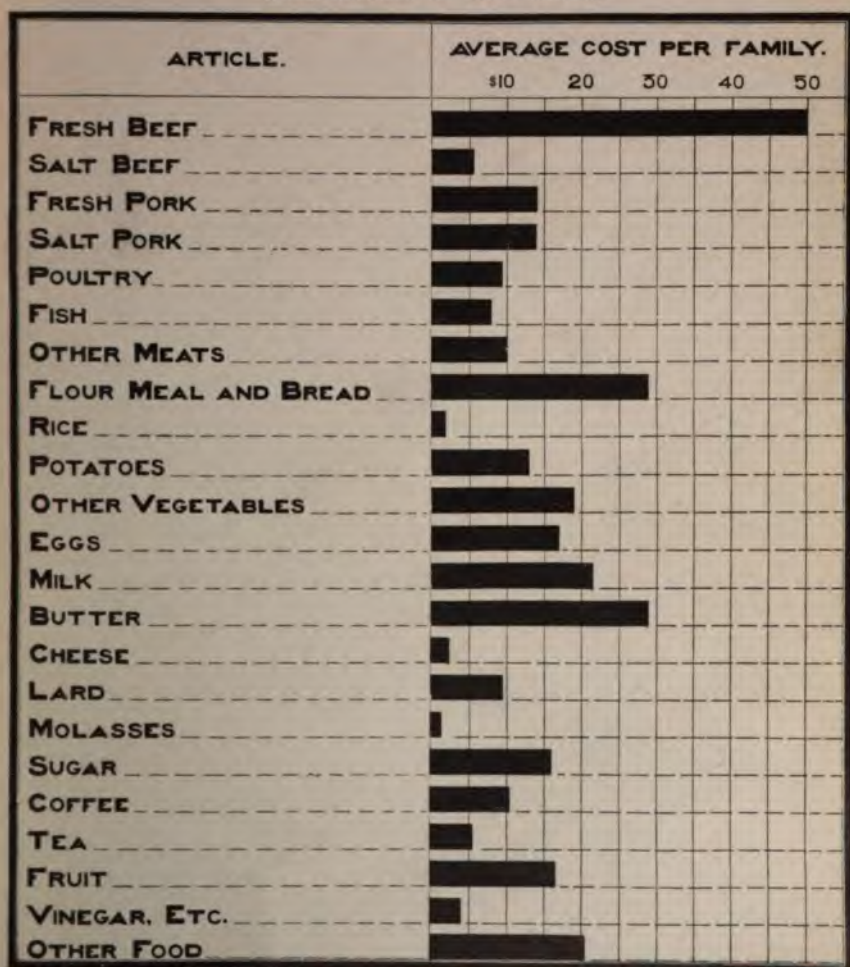
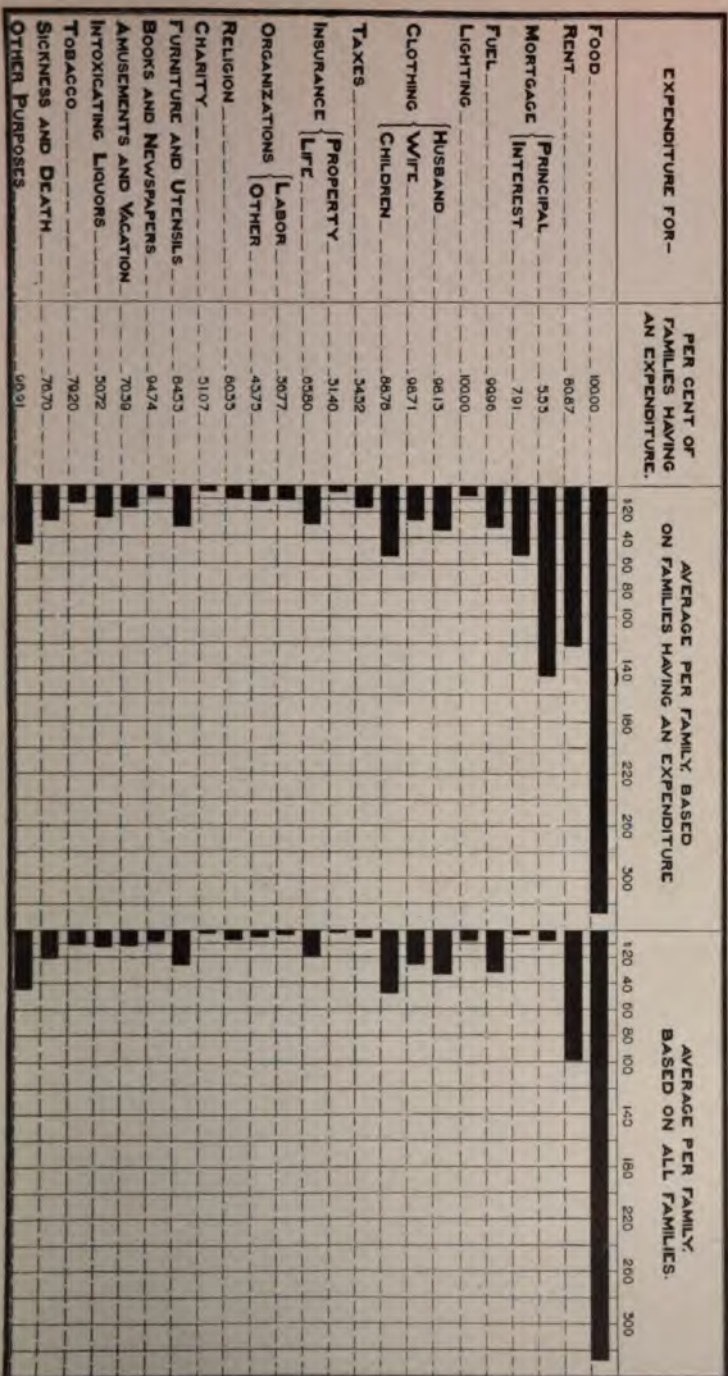


CHART 37



AVERAGE EXPENDITURE PER FAMILY FOR VARIOUS PURPOSES IN 1901. FOR THE UNITED STATES. [FROM REPORTS OF 2567 FAMILIES].





**AVERAGE COST OF FOOD PER FAMILY, EACH YEAR,
1890 TO 1903, FOR THE UNITED STATES.**

[FROM REPORTS OF 2567 FAMILIES].

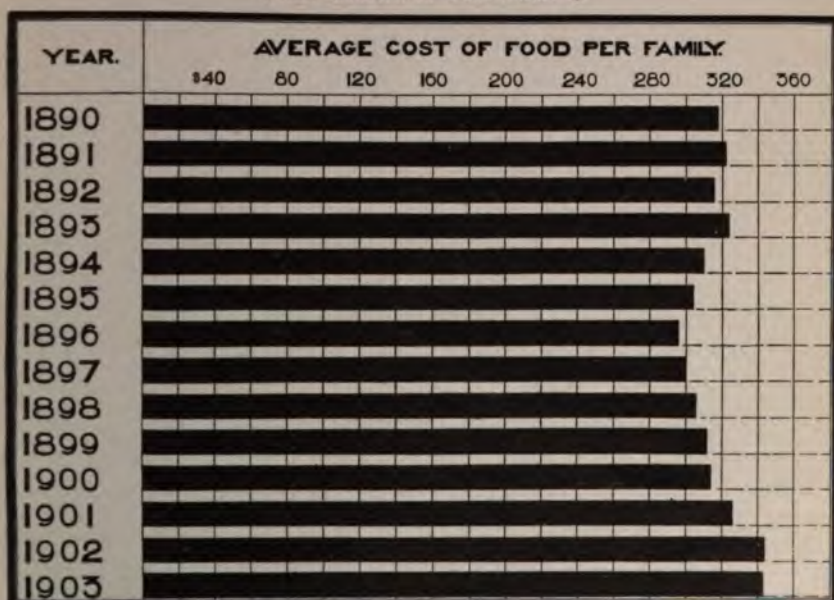


CHART 39

TABLE 27.—AVERAGE EXPENDITURE PER FAMILY FOR VARIOUS PURPOSES IN 1901, BY GEOGRAPHICAL DIVISIONS AND FOR THE UNITED STATES—Concluded.

Expenditure for—	South Central States.			Western States.			United States.		
	Per cent of families having an expenditure.	Average per family, based on families having an expenditure.	Average per family, based on all families.	Per cent of families having an expenditure.	Average per family, based on families having an expenditure.	Average per family, based on all families.	Per cent of families having an expenditure.	Average per family, based on families having an expenditure.	Average per family, based on all families.
Food	100.00	\$292.68	\$292.68	100.00	\$308.53	\$308.53	100.00	\$326.90	\$326.90
Rent	79.51	91.51	72.75	73.33	143.55	105.27	80.87	122.92	99.49
Mortgage:									
Principal	4.10	182.50	b 7.07	7.78	141.86	11.08	5.58	c 145.82	d 8.15
Interest	.82	(a)	(e)	7.78	17.14	1.33	7.91	e 53.73	f 3.96
Fuel	99.18	24.64	24.44	100.00	35.05	35.05	99.96	32.24	32.23
Lighting	100.00	4.77	4.77	100.00	7.71	7.71	100.00	8.15	8.15
Clothing:									
Husband	96.72	29.60	28.63	98.89	37.07	36.66	98.13	34.38	33.73
Wife	97.54	19.51	19.03	100.00	36.53	36.53	98.71	26.37	26.03
Children	90.98	52.53	47.79	87.78	64.11	56.28	88.78	54.15	48.06
Taxes	44.26	13.74	6.08	33.33	8.88	2.96	34.32	16.86	5.79
Insurance:									
Property	22.95	7.35	1.69	48.89	6.11	2.99	31.40	4.89	1.53
Life	63.93	26.06	16.66	34.44	30.35	10.45	65.80	29.55	19.44
Organizations:									
Labor	24.59	10.50	2.58	52.22	25.39	13.26	36.77	10.52	3.87
Other	29.51	10.08	2.97	32.22	13.00	4.19	43.75	11.84	5.18
Religion	77.05	9.05	6.97	74.44	12.24	9.11	80.83	9.49	7.62
Charity	57.38	4.34	2.49	71.11	7.48	5.32	51.07	4.68	2.39
Furniture and utensils	64.75	30.75	19.91	100.00	14.64	14.64	84.53	31.13	26.31
Books and newspapers	34.43	6.49	5.48	100.00	14.02	14.02	94.74	8.82	8.35
Amusements and vacation	34.43	13.47	4.64	100.00	14.79	14.79	70.89	17.44	12.28
Intoxicating liquors	52.46	14.09	7.89	25.56	11.91	3.05	50.72	24.53	12.44
Tobacco	75.41	11.04	8.33	71.11	11.63	8.27	79.20	13.80	10.93
Sickness and death	93.44	25.63	23.95	36.67	25.17	9.23	76.70	26.78	20.54
Other purposes	99.18	84.51	83.81	100.00	40.79	40.79	98.91	45.63	45.13

a Not including payment made by 1 family, in which principal and interest were combined.

b Including interest paid by 1 family.

c Not including payments made by 13 families, in which principal and interest were combined.

d Including interest paid by 13 families.

e Not including interest paid by 1 family, included in principal.

f Not including interest paid by 13 families, included in principal.

TABLE 28.—AVERAGE COST OF FOOD PER FAMILY EACH YEAR, 1890 TO 1903, BY GEOGRAPHICAL DIVISIONS AND FOR THE UNITED STATES.

[Based on the average cost per family in 1901 and the course of retail prices of food indicated by the relative prices weighted according to family consumption.]

Year.	North Atlantic States (1,415 families).	South Atlantic States (219 families).	North Central States (721 families).	South Central States (122 families).	Western States (90 families).	United States (2,567 families).
1890.....	\$330.35	\$282.72	\$310.08	\$279.54	\$332.61	\$318.20
1891.....	334.26	285.23	316.75	283.64	335.72	322.55
1892.....	329.70	282.44	308.57	275.71	324.90	316.65
1893.....	337.13	288.90	319.48	283.37	317.80	324.41
1894.....	320.34	279.36	304.93	273.79	306.68	309.81
1895.....	315.50	275.73	297.05	268.59	298.65	303.91
1896.....	313.23	270.42	286.74	263.11	287.84	296.76
1897.....	312.91	271.26	289.77	266.40	286.29	299.24
1898.....	319.06	277.41	298.26	270.50	294.01	306.70
1899.....	321.31	280.76	299.78	273.51	304.21	309.19
1900.....	326.80	286.07	305.54	276.80	302.97	314.16
1901.....	338.10	298.64	321.60	292.68	308.53	326.90
1902.....	356.83	312.83	338.57	310.75	322.43	344.61
1903.....	353.92	310.65	335.86	311.85	317.49	342.13

For purposes of comparison by size of family, by size of income, etc., those families having certain attributes were selected from the whole number investigated. The families thus selected are termed "normal," the "normal" family for the purposes of this study being one which has—

The husband at work;

A wife;

Not more than five children, and none over 14 years of age;

No dependent, boarder, lodger, or servant;

Expenditures for rent, fuel, lighting, food, clothing, and sundries.

The charts on exhibit relating to the expenditures for various purposes in 11,156 normal families are given in the following list, reference being made by number in each case to the table which furnishes the data forming the basis for the graphic presentation:

CHARTS RELATING TO 11,156 "NORMAL" FAMILIES.

Per cent of total expenditure made for various purposes in normal families, by size of family (Table 29).

Per cent of total expenditure made for various purposes in normal families, by size of income (Table 30).

Per cent of total expenditure made for various purposes in normal families having no children, by size of income (Table 31).

Per cent of total expenditure made for various purposes in normal families having one child, by size of income (Table 32).

Per cent of total expenditure made for various purposes in normal families having two children, by size of income (Table 33).

Per cent of total expenditure made for various purposes in normal families having three children, by size of income (Table 34).

Per cent of total expenditure made for various purposes in normal families having four children, by size of income (Table 35).

Per cent of total expenditure made for various purposes in normal families having five children, by size of income (Table 36).

Per cent of total expenditure made for various purposes in normal families, by geographical divisions and general nativity of head of family (Table 37).

Per cent of total expenditure made for various purposes in normal families, by nativity of head of family (Table 38).

Per cent of total expenditure made for various purposes in normal families having no children, by geographical divisions and general nativity of head of family (Table 39).

Per cent of total expenditure made for various purposes in normal families having one child, by geographical divisions and general nativity of head of family (Table 40).

Per cent of total expenditure made for various purposes in normal families having two children, by geographical divisions and general nativity of head of family (Table 41).

Per cent of total expenditure made for various purposes in normal families having three children, by geographical divisions and general nativity of head of family (Table 42).

Per cent of total expenditure made for various purposes in normal families having four children, by geographical divisions and general nativity of head of family (Table 43).

Per cent of total expenditure made for various purposes in normal families having five children, by geographical divisions and general nativity of head of family (Table 44).

Of the above sixteen charts the second is reproduced on page 1150. The sixteen tables which follow contain the data upon which the sixteen charts were based:

TABLE 29.—PER CENT OF TOTAL EXPENDITURE MADE FOR VARIOUS PURPOSES IN NORMAL FAMILIES, BY SIZE OF FAMILY.

Families with—	Per cent of total expenditure made for—					
	Food.	Rent.	Clothing.	Fuel.	Lighting.	Sundries.
No children.....	40.33	20.23	12.43	4.76	1.14	21.11
One child.....	41.74	18.48	12.64	4.67	1.14	21.33
Two children.....	43.21	17.81	13.03	4.59	1.13	20.23
Three children.....	44.66	17.44	13.17	4.45	1.10	19.28
Four children.....	45.69	16.76	13.36	4.23	1.08	18.88
Five children.....	47.24	16.54	13.85	4.52	1.04	16.81
All families.....	43.13	18.12	12.95	4.57	1.12	20.11

TABLE 30.—PER CENT OF TOTAL EXPENDITURE MADE FOR VARIOUS PURPOSES IN NORMAL FAMILIES, BY SIZE OF INCOME.

Families having income—	Per cent of total expenditure made for—					
	Food.	Rent.	Clothing.	Fuel.	Lighting.	Sundries.
Under \$200.....	50.85	16.93	8.68	6.69	1.27	15.58
\$200 to \$300.....	47.33	18.02	8.66	6.09	1.13	18.77
\$300 to \$400.....	48.09	18.69	10.02	5.97	1.14	16.09
\$400 to \$500.....	46.88	18.57	11.39	5.54	1.12	16.50
\$500 to \$700.....	46.16	18.43	11.98	5.09	1.12	17.22
\$700 to \$900.....	43.48	18.48	12.88	4.65	1.12	19.79
\$900 to \$900.....	41.44	18.17	13.50	4.14	1.12	21.63
\$900 to \$900.....	41.37	17.07	13.57	3.87	1.10	23.02
\$900 to \$1,000.....	39.90	17.58	14.35	3.85	1.11	23.21
\$1,000 to \$1,100.....	38.79	17.53	15.06	3.77	1.16	23.69
\$1,100 to \$1,200.....	37.68	16.59	14.89	3.63	1.08	26.13
\$1,200 and over.....	36.45	17.40	15.72	3.85	1.18	25.40
Total families.....	43.13	18.12	12.95	4.57	1.12	20.11

TABLE 31.—PER CENT OF TOTAL EXPENDITURE MADE FOR VARIOUS PURPOSES IN NORMAL FAMILIES HAVING NO CHILDREN, BY SIZE OF INCOME.

Families having income—	Per cent of total expenditure made for—					
	Food.	Rent.	Clothing.	Fuel.	Lighting.	Sundries.
Under \$200.....	45.40	17.47	8.94	7.10	1.33	18.32
\$200 to \$300.....	42.55	21.17	7.30	6.46	1.17	17.35
\$300 to \$400.....	45.42	20.11	9.81	6.01	1.12	17.54
\$400 to \$500.....	44.43	19.93	10.96	5.56	1.19	18.02
\$500 to \$600.....	43.30	20.49	11.56	5.18	1.16	18.29
\$600 to \$700.....	46.09	20.35	12.44	4.75	1.18	21.35
\$700 to \$800.....	37.74	20.67	13.16	4.21	1.11	23.11
\$800 to \$900.....	38.06	20.17	13.86	4.30	1.09	22.48
\$900 to \$1,000.....	37.47	20.26	13.40	4.21	1.16	22.90
\$1,000 to \$1,200.....	36.41	19.17	13.49	4.01	1.22	23.70
\$1,200 to \$1,500.....	31.30	20.11	15.10	4.17	1.26	25.76
\$1,500 and over.....	36.53	18.78	14.60	3.54	1.22	25.28
Total families.....	40.33	20.23	12.43	4.76	1.14	21.11

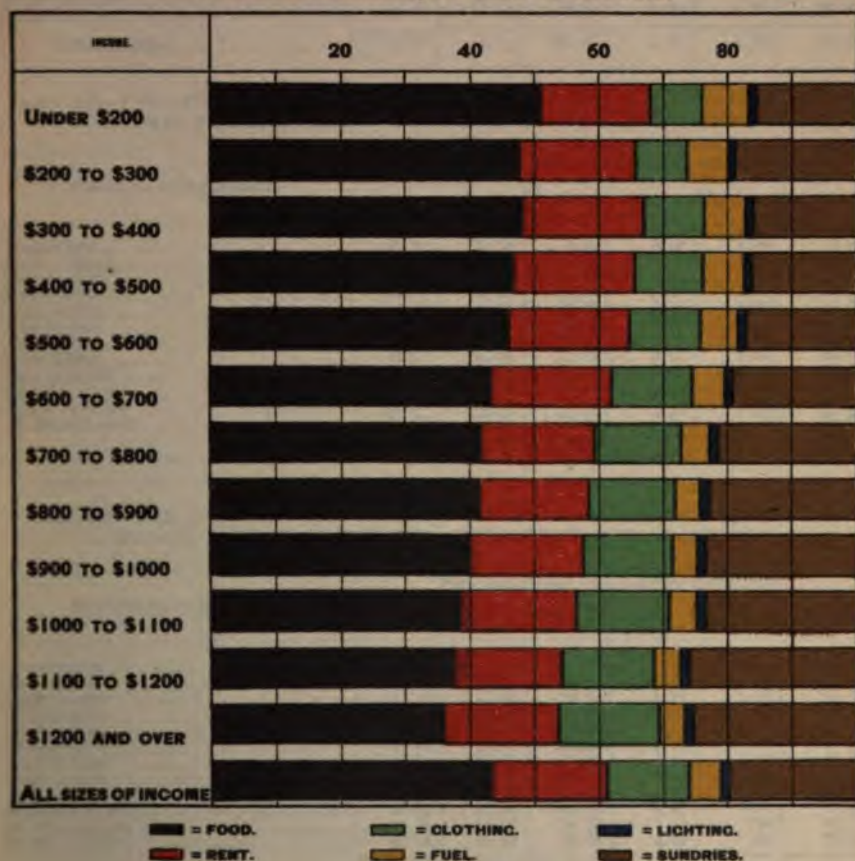
TABLE 32.—PER CENT OF TOTAL EXPENDITURE MADE FOR VARIOUS PURPOSES IN NORMAL FAMILIES HAVING ONE CHILD, BY SIZE OF INCOME.

Families having income—	Per cent of total expenditure made for—					
	Food.	Rent.	Clothing.	Fuel.	Lighting.	Sundries.
Under \$200.....	33.55	14.64	7.71	7.45	1.34	15.31
\$200 to \$300.....	46.11	15.47	8.43	5.82	1.18	22.09
\$300 to \$400.....	47.08	15.40	9.41	5.88	1.16	18.07
\$400 to \$500.....	44.69	18.59	11.47	5.60	1.15	18.50
\$500 to \$600.....	44.57	18.53	11.74	5.08	1.15	18.93
\$600 to \$700.....	41.91	18.88	12.81	4.69	1.13	20.56
\$700 to \$800.....	39.65	18.97	13.09	4.24	1.12	22.73
\$800 to \$900.....	39.74	17.25	13.87	4.17	1.10	24.37
\$900 to \$1,000.....	39.01	18.08	14.11	4.03	1.15	23.62
\$1,000 to \$1,200.....	37.82	18.36	15.00	3.96	1.09	24.25
\$1,200 to \$1,500.....	37.25	16.12	16.28	3.39	1.11	25.85
\$1,500 and over.....	33.65	17.31	13.95	3.63	1.20	30.06
Total families.....	41.74	18.48	12.64	4.67	1.14	21.33

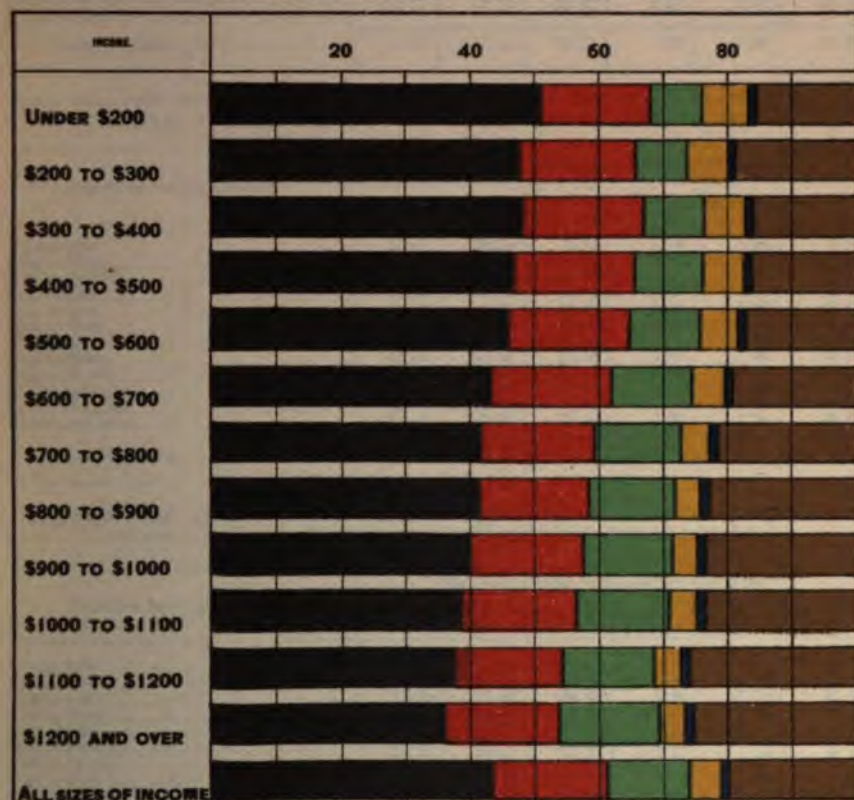
TABLE 33.—PER CENT OF TOTAL EXPENDITURE MADE FOR VARIOUS PURPOSES IN NORMAL FAMILIES HAVING TWO CHILDREN, BY SIZE OF INCOME.

Families having income—	Per cent of total expenditure made for—					
	Food.	Rent.	Clothing.	Fuel.	Lighting.	Sundries.
Under \$200.....	52.21	14.68	5.87	7.64	1.63	17.97
\$200 to \$300.....	48.12	17.19	9.40	5.89	1.04	18.36
\$300 to \$400.....	48.69	18.09	10.57	5.88	1.15	15.62
\$400 to \$500.....	47.47	18.48	11.47	5.61	1.15	15.82
\$500 to \$600.....	45.98	17.96	12.16	5.03	1.11	17.76
\$600 to \$700.....	43.59	17.88	12.82	4.60	1.16	19.95
\$700 to \$800.....	41.66	17.54	13.31	4.06	1.11	22.32
\$800 to \$900.....	41.08	17.06	13.84	4.07	1.15	22.80
\$900 to \$1,000.....	39.64	17.90	14.49	3.97	1.10	22.90
\$1,000 to \$1,200.....	37.60	18.68	16.36	4.14	1.20	22.02
\$1,200 to \$1,500.....	38.74	16.16	14.40	3.89	1.08	25.73
\$1,500 and over.....	35.13	16.97	16.59	4.09	1.19	26.03
Total families.....	43.21	17.61	13.03	4.59	1.13	20.23

**PER CENT OF TOTAL EXPENDITURE MADE FOR VARIOUS PURPOSES IN
NORMAL FAMILIES, BY SIZE OF INCOME.**



**PER CENT OF TOTAL EXPENDITURE MADE FOR VARIOUS PURPOSES IN
NORMAL FAMILIES, BY SIZE OF INCOME.**



■ = FOOD.

■ = CLOTHING.

■ = LIGHTING.

■ = RENT.

■ = FUEL.

■ = SUNDRIES.

TABLE 37.—PER CENT OF TOTAL EXPENDITURE MADE FOR VARIOUS PURPOSES IN NORMAL FAMILIES, BY GEOGRAPHICAL DIVISIONS AND GENERAL NATIVITY OF HEAD OF FAMILY.

Geographical division and general nativity of head of family.	Per cent of total expenditure made for—					
	Food.	Rent.	Clothing.	Fuel.	Lighting.	Sundries.
North Atlantic States:						
Native	42.26	19.97	13.04	4.55	1.15	19.03
Foreign	44.45	19.33	12.30	4.53	1.21	18.15
Total	43.17	19.70	12.73	4.54	1.18	18.68
South Atlantic States:						
Native	43.39	16.56	12.69	4.96	.97	21.43
Foreign	46.77	16.35	12.28	4.50	.91	19.19
Total	43.64	16.54	12.67	4.93	.96	21.26
North Central States:						
Native	42.33	15.15	13.04	4.23	1.08	24.17
Foreign	46.17	15.46	12.99	5.51	1.09	18.78
Total	43.47	15.25	13.02	4.61	1.08	22.57
South Central States:						
Native	41.48	16.29	13.19	3.89	.82	24.33
Foreign	43.09	17.38	12.45	3.94	.74	22.40
Total	41.67	16.41	13.11	3.89	.81	21.11
Western States:						
Native	40.38	20.29	15.65	4.66	1.06	17.96
Foreign	41.87	19.62	15.44	4.63	1.08	17.36
Total	40.85	20.08	15.58	4.65	1.07	17.77

TABLE 38.—PER CENT OF TOTAL EXPENDITURE MADE FOR VARIOUS PURPOSES IN NORMAL FAMILIES, BY NATIVITY OF HEAD OF FAMILY.

Nativity of head of family.	Per cent of total expenditure made for—					
	Food.	Rent.	Clothing.	Fuel.	Lighting.	Sundries.
United States	42.26	18.02	13.13	4.45	1.10	21.04
Austria-Hungary	49.45	16.24	12.54	5.06	1.18	15.53
Canada	43.50	17.65	14.01	4.86	1.15	18.83
Denmark	44.93	17.11	12.42	4.98	1.22	19.34
England	43.19	18.79	13.62	4.58	1.18	18.64
France	41.73	18.49	13.67	4.58	1.08	20.45
Germany	44.56	17.95	12.48	4.81	1.14	19.06
Ireland	45.49	19.37	11.79	4.63	1.16	17.56
Italy	45.70	18.63	11.81	4.80	1.28	17.78
Netherlands	43.84	16.87	12.97	6.71	1.35	18.28
Norway	46.02	16.15	12.33	4.95	1.12	19.43
Russia	47.71	17.46	11.62	4.95	1.31	16.75
Scotland	42.95	17.37	13.18	4.55	1.13	20.82
Sweden	43.67	18.62	13.02	4.91	1.16	18.62
Switzerland	43.58	19.53	10.70	5.00	1.18	20.01
Wales	44.23	18.25	13.92	4.66	1.04	17.90
Other foreign	43.50	18.84	12.44	4.90	1.16	19.16
Total foreign	44.79	18.31	12.59	4.78	1.17	18.36
United States and foreign	43.13	18.12	12.95	4.57	1.12	20.11

TABLE 39.—PER CENT OF TOTAL EXPENDITURE MADE FOR VARIOUS PURPOSES IN NORMAL FAMILIES HAVING NO CHILDREN, BY GEOGRAPHICAL DIVISIONS AND GENERAL NATIVITY OF HEAD OF FAMILY.

Geographical division and general nativity of head of family.	Per cent of total expenditure made for—					
	Food.	Rent.	Clothing.	Fuel.	Lighting.	Sundries.
North Atlantic States:						
Native	39.52	21.72	12.19	4.64	1.17	20.76
Foreign	41.55	20.82	11.80	4.53	1.22	20.08
Total	40.24	21.40	12.05	4.60	1.19	20.52
South Atlantic States:						
Native	41.54	16.80	11.64	4.88	.98	24.21
Foreign	40.93	17.24	14.41	3.63	.90	22.89
Total	41.62	16.81	11.72	4.85	.98	24.17
North Central States:						
Native	39.80	17.99	13.77	5.34	1.13	21.97
Foreign	43.34	16.80	12.49	5.67	1.11	20.59
Total	40.91	17.61	13.37	5.44	1.13	21.54
South Central States:						
Native	38.23	16.73	12.83	3.81	.81	27.59
Foreign	40.84	17.18	12.41	3.64	.69	25.24
Total	38.65	16.80	12.77	3.78	.79	27.21
Western States:						
Native	39.00	21.87	13.82	4.75	1.14	19.42
Foreign	40.40	21.95	13.65	5.15	1.26	17.59
Total	39.47	21.90	13.76	4.88	1.18	18.81

TABLE 40.—PER CENT OF TOTAL EXPENDITURE MADE FOR VARIOUS PURPOSES IN NORMAL FAMILIES HAVING ONE CHILD, BY GEOGRAPHICAL DIVISIONS AND GENERAL NATIVITY OF HEAD OF FAMILY.

Geographical division and general nativity of head of family.	Per cent of total expenditure made for—					
	Food.	Rent.	Clothing.	Fuel.	Lighting.	Sundries.
North Atlantic States:						
Native	40.74	20.22	12.62	4.51	1.21	20.70
Foreign	42.67	20.13	11.41	4.53	1.24	19.82
Total	41.63	20.19	12.17	4.52	1.22	20.37
South Atlantic States:						
Native	42.85	16.07	12.04	5.10	.96	22.98
Foreign	46.09	14.67	13.17	4.63	.85	20.59
Total	43.11	15.95	12.14	5.06	.95	22.79
North Central States:						
Native	41.32	15.77	13.30	4.74	1.07	23.80
Foreign	44.33	15.73	13.03	5.71	1.11	20.09
Total	42.14	15.76	13.23	5.01	1.08	22.78
South Central States:						
Native	39.50	16.01	13.18	3.87	.81	26.63
Foreign	44.20	16.01	13.29	4.47	.70	21.33
Total	39.89	16.01	13.19	3.92	.80	26.19
Western States:						
Native	41.05	20.83	15.15	4.49	.98	17.50
Foreign	41.74	19.68	15.07	4.59	.96	17.96
Total	41.23	20.53	15.13	4.52	.97	17.62

TABLE 41.—PER CENT OF TOTAL EXPENDITURE MADE FOR VARIOUS PURPOSES IN NORMAL FAMILIES HAVING TWO CHILDREN, BY GEOGRAPHICAL DIVISIONS AND GENERAL NATIVITY OF HEAD OF FAMILY.

Geographical division and general nativity of head of family.	Per cent of total expenditure made for—					
	Food.	Rent.	Clothing.	Fuel.	Lighting.	Sundries.
North Atlantic States:						
Native	42.65	19.56	13.36	4.60	1.14	18.69
Foreign	44.27	19.15	12.38	4.58	1.24	18.38
Total	43.32	19.39	12.96	4.59	1.18	18.56
South Atlantic States:						
Native	43.93	16.78	12.26	5.05	1.04	20.94
Foreign	48.93	18.07	12.27	4.63	.98	15.12
Total	44.13	16.83	12.26	5.08	1.04	20.71
North Central States:						
Native	42.42	14.91	12.93	4.22	1.09	24.43
Foreign	45.91	15.53	12.61	5.39	1.09	19.47
Total	43.96	15.09	12.85	4.53	1.09	23.09
South Central States:						
Native	41.53	16.35	13.30	3.98	.86	24.03
Foreign	42.44	16.89	10.93	4.13	.64	24.97
Total	41.61	16.39	13.10	3.95	.84	24.11
Western States:						
Native	40.41	19.57	16.51	4.85	1.10	17.56
Foreign	41.97	21.24	14.84	4.62	1.14	16.19
Total	40.71	19.89	16.19	4.81	1.11	17.29

TABLE 42.—PER CENT OF TOTAL EXPENDITURE MADE FOR VARIOUS PURPOSES IN NORMAL FAMILIES HAVING THREE CHILDREN, BY GEOGRAPHICAL DIVISIONS AND GENERAL NATIVITY OF HEAD OF FAMILY.

Geographical division and general nativity of head of family.	Per cent of total expenditure made for—					
	Food.	Rent.	Clothing.	Fuel.	Lighting.	Sundries.
North Atlantic States:						
Native	44.20	19.02	13.60	4.48	1.13	17.57
Foreign	45.57	18.74	12.66	4.50	1.19	17.34
Total	44.83	18.89	13.17	4.49	1.16	17.46
South Atlantic States:						
Native	43.60	17.35	13.76	4.94	1.00	19.35
Foreign	44.37	17.72	12.08	4.51	.96	20.36
Total	43.69	17.40	13.57	4.89	.99	19.46
North Central States:						
Native	43.37	14.27	12.63	3.79	1.07	24.87
Foreign	47.38	15.20	13.05	5.48	1.06	17.84
Total	44.62	14.56	12.76	4.32	1.06	22.68
South Central States:						
Native	44.30	16.72	12.77	4.12	.80	21.29
Foreign	43.39	16.99	13.85	4.01	.78	20.98
Total	44.17	16.76	12.93	4.10	.80	21.24
Western States:						
Native	40.44	19.35	16.53	4.58	1.09	18.01
Foreign	43.43	18.25	15.68	4.33	.96	17.85
Total	41.49	18.96	16.23	4.49	1.05	17.78

TABLE 43.—PER CENT OF TOTAL EXPENDITURE MADE FOR VARIOUS PURPOSES IN NORMAL FAMILIES HAVING FOUR CHILDREN, BY GEOGRAPHICAL DIVISIONS AND GENERAL NATIVITY OF HEAD OF FAMILY.

Geographical division and general nativity of head of family.	Per cent of total expenditure made for—					
	Food.	Rent.	Clothing.	Fuel.	Lighting.	Sundries.
North Atlantic States:						
Native	45.89	18.98	13.65	4.53	1.09	15.91
Foreign	47.08	18.16	13.23	4.52	1.17	15.84
Total	46.48	18.55	13.44	4.52	1.13	15.88
South Atlantic States:						
Native	44.80	16.48	14.36	4.64	.91	19.31
Foreign	53.81	16.35	9.55	5.19	.98	14.12
Total	45.14	16.47	13.98	4.69	.92	18.85
North Central States:						
Native	43.38	18.76	12.66	3.16	1.05	26.04
Foreign	48.64	14.98	13.39	5.29	1.14	16.66
Total	44.84	14.12	12.87	3.78	1.07	23.32
South Central States:						
Native	45.26	15.42	13.35	3.70	.80	21.47
Foreign	46.98	16.82	10.86	3.78	.88	20.68
Total	45.45	15.58	13.08	3.71	.80	21.38
Western States:						
Native	42.18	17.87	18.58	4.22	.80	16.35
Foreign	41.39	18.08	17.97	4.05	1.12	17.39
Total	41.75	17.99	18.25	4.13	.97	16.91

TABLE 44.—PER CENT OF TOTAL EXPENDITURE MADE FOR VARIOUS PURPOSES IN NORMAL FAMILIES HAVING FIVE CHILDREN, BY GEOGRAPHICAL DIVISIONS AND GENERAL NATIVITY OF HEAD OF FAMILY.

Geographical division and general nativity of head of family.	Per cent of total expenditure made for—					
	Food.	Rent.	Clothing.	Fuel.	Lighting.	Sundries.
North Atlantic States:						
Native	46.05	18.21	14.27	4.35	1.08	16.04
Foreign	48.72	17.79	12.92	4.57	1.14	14.86
Total	47.37	18.00	13.60	4.46	1.11	15.46
South Atlantic States:						
Native	47.59	14.03	13.33	4.99	.84	19.22
Foreign	47.27	13.52	13.34	3.34	.65	21.88
Total	47.55	13.97	13.33	4.80	.82	19.53
North Central States:						
Native	46.86	14.10	13.44	4.01	.97	20.62
Foreign	49.18	13.81	14.07	5.59	1.02	16.33
Total	47.90	13.97	13.72	4.71	1.00	18.70
South Central States:						
Native	44.28	16.25	14.74	3.84	.83	20.06
Foreign	44.03	25.29	12.09	3.75	.90	13.94
Total	44.25	17.24	14.45	3.83	.83	19.40
Western States:						
Native	43.79	17.12	18.55	4.26	.94	15.34
Foreign	43.63	15.20	18.43	4.47	.95	17.32
Total	43.68	15.79	18.47	4.41	.94	16.71

CONSUMPTION OF FOOD.

In order to make an exact comparison of expenditures for food the relative amount of food consumed by the different members of the family must be taken into consideration. Inasmuch as the amount of food consumed in a family depends not only on the number of children, but also on their ages, it is necessary to ascertain the relative consuming powers of the different members of the "normal" families. As the result of careful comparison and study, it was assumed as generally true--

1. That all husbands consume a like amount of food.
2. That the wife consumes 90 per cent as much food as the husband.
3. That a child from 11 to 14 years of age, inclusive, consumes 90 per cent as much food as the husband.
4. That a child from 7 to 10 years of age, inclusive, consumes 75 per cent as much food as the husband.
5. That a child from 4 to 6 years of age, inclusive, consumes 40 per cent as much food as the husband.
6. That a child 3 years of age or under consumes 15 per cent as much food as the husband.

The consumption of food in the normal family may then be expressed as follows:

Husband	100
Wife	90
Children from 11 to 14 years, inclusive.....	90
Children from 7 to 10 years, inclusive.....	75
Children from 4 to 6 years, inclusive.....	40
Children 3 years of age or under	15

Assigning to each member of the family the appropriate weight in consuming power, a series of charts was constructed showing the yearly cost of food per 100 units of consumption, that is, per adult male. A list of these charts, covering 1,043 "normal" families reporting expenditures in detail, follow, the usual reference being made by number to the table which furnishes the data forming the basis for the graphic presentation:

CHARTS RELATING TO 1,043 "NORMAL" FAMILIES REPORTING
EXPENDITURES IN DETAIL.

Average yearly cost of various articles of food per 100 units of consumption, by general nativity of head of family (Table 45).

Average yearly cost of various articles of food per 100 units of consumption, by geographical divisions (Table 46).

Average yearly cost of food per 100 units of consumption, by geographical division and size of family (Table 47).

Average yearly cost of food per 100 units of consumption, by general nativity of head of family and size of family (Table 48).

None of the above charts is reproduced. The four tables which follow contain the data upon which the four charts were based:

TABLE 45.—AVERAGE YEARLY COST OF VARIOUS ARTICLES OF FOOD PER 100 UNITS OF CONSUMPTION, BY GENERAL NATIVITY OF HEAD OF FAMILY.

Article.	Native.	Foreign.	Total.
Fresh beef.....	\$13.70	\$13.95	\$13.78
Salt beef.....	1.12	1.36	1.20
Fresh pork.....	3.67	3.36	3.57
Salt pork.....	3.71	3.13	3.51
Poultry.....	2.86	2.54	2.75
Fish.....	1.99	2.21	2.06
Other meat.....	2.74	3.01	2.83
Flour, meal, and bread.....	7.79	8.23	7.93
Rice.....	.64	.59	.62
Potatoes.....	3.48	3.84	3.60
Eggs.....	4.70	4.76	4.72
Milk.....	6.52	6.82	6.62
Butter.....	7.55	7.37	7.49
Cheese.....	.64	.87	.72
Lard.....	2.82	1.94	2.52
Molasses.....	.53	.40	.49
Sugar.....	4.09	3.99	4.05
Coffee.....	3.23	2.73	3.07
Tea.....	1.47	1.73	1.57

TABLE 46.—AVERAGE YEARLY COST OF VARIOUS ARTICLES OF FOOD PER 100 UNITS OF CONSUMPTION, BY GEOGRAPHICAL DIVISIONS.

Article.	North Atlantic States.	South Atlantic States.	North Central States.	South Central States.	Western States.
Fresh beef.....	\$14.95	\$11.62	\$11.93	\$9.59	\$15.67
Salt beef.....	1.82	.55	.34	.....	.17
Fresh pork.....	3.31	3.06	4.72	3.01	1.08
Salt pork.....	3.47	7.05	2.45	7.42	3.08
Poultry.....	2.88	2.34	2.85	1.72	1.96
Fish.....	2.36	2.00	1.60	1.08	1.90
Other meat.....	3.41	1.04	2.52	.16	1.66
Flour, meal, and bread.....	8.79	8.45	6.25	7.96	6.23
Rice.....	.60	1.40	.52	1.06	.24
Potatoes.....	3.89	3.14	3.25	3.32	2.77
Eggs.....	5.23	4.47	4.12	3.06	3.35
Milk.....	7.03	3.94	6.80	2.85	6.51
Butter.....	7.77	6.68	6.94	6.02	9.34
Cheese.....	.79	.63	.67	.83	.17
Lard.....	2.18	3.92	2.96	4.24	1.33
Molasses.....	.47	.64	.35	1.07	.89
Sugar.....	4.22	4.17	3.56	4.55	4.26
Coffee.....	2.95	2.91	3.56	2.63	2.16
Tea.....	1.94	1.60	.96	.96	.91

TABLE 47.—AVERAGE YEARLY COST OF FOOD PER 100 UNITS OF CONSUMPTION, BY GEOGRAPHICAL DIVISIONS AND SIZE OF FAMILY.

Size of family.	North Atlantic States.	South Atlantic States.	North Central States.	South Central States.	Western States.
No children.....	\$123.96	\$112.16	\$107.41	\$128.10	\$136.37
One child.....	112.25	98.68	109.54	84.74	111.10
Two children.....	103.29	78.69	88.97	81.19	87.79
Three children.....	89.32	67.35	86.31	64.47	81.77
Four children.....	75.88	84.80	75.08	67.17	74.67
Five children.....	64.99	62.74	66.73	62.73	75.40
All families.....	94.51	87.29	87.17	79.26	89.54

TABLE 48.—AVERAGE YEARLY COST OF FOOD PER 100 UNITS OF CONSUMPTION, BY GENERAL NATIVITY OF HEAD OF FAMILY AND SIZE OF FAMILY.

Size of family.	Native.	Foreign.	Total.
No children	\$119.85	\$124.41	\$121.01
One child	109.94	106.81	109.20
Two children	95.24	100.34	96.82
Three children	85.06	87.71	86.05
Four children	78.13	71.61	75.82
Five children	69.75	60.48	66.16
All families	92.95	88.09	91.31

RETAIL PRICES.

The general family conditions as regards its composition of the family, sources of income, amount of income, amount of expenditure, etc., having been shown in the preceding tables and charts constructed therefrom, it was deemed desirable to include in the exhibit a series of charts showing the course of the retail prices of at least a number of the principal articles of family consumption as given in Bulletin 53 of the Bureau and in the forthcoming Eighteenth Annual Report, now in press. The figures cover the years from 1890 to 1903, and are the result of an investigation covering 814 retail establishments in the same localities from which the data for the previous tables were obtained. Prices were secured from the books of retail merchants, representing actual sales, for 30 distinct articles of food entering largely into family consumption and the averages include data from all sections of the country. In order to show the changes from year to year relative prices or index numbers were computed and on these were based the charts relating to retail prices. These relative prices consist of a series of percentages showing the per cent the average price in each year was of the average price for the 10-year period from 1890 to 1899. This average price for a period was deemed more representative of average conditions than the price for any one year, and was therefore selected as a base for all articles. Charts were exhibited showing the trend of prices during the period for a selected list of 10 articles, while another series of 6 charts were presented showing the trend of prices of all food during the period for each of five geographical divisions of the country and for the United States as a whole. The following is a list of the titles of the 16 charts, each title being followed by an indication of the table containing the figures from which the chart was constructed:

CHARTS SHOWING RETAIL PRICES.

- Relative prices of fresh beef, 1890 to 1903 (Table 49).
- Relative prices of butter, 1890 to 1903 (Table 49).
- Relative prices of eggs, 1890 to 1903 (Table 49).
- Relative prices of wheat flour, 1890 to 1903 (Table 49).
- Relative prices of lard, 1890 to 1903 (Table 49).
- Relative prices of fresh pork, 1890 to 1903 (Table 49).

Relative prices of bacon, 1890 to 1903 (Table 49).

Relative prices of smoked ham, 1890 to 1903 (Table 49).

Relative prices of Irish potatoes, 1890 to 1903 (Table 49).

Relative prices of sugar, 1890 to 1903 (Table 49).

Relative prices of food in the North Atlantic States, weighted according to family consumption, 1890 to 1903 (Table 50).

Relative prices of food in the South Atlantic States, weighted according to family consumption, 1890 to 1903 (Table 50).

Relative prices of food in the North Central States, weighted according to family consumption, 1890 to 1903 (Table 50).

Relative prices of food in the South Central States, weighted according to family consumption, 1890 to 1903 (Table 50).

Relative prices of food in the Western States, weighted according to family consumption, 1890 to 1903 (Table 50).

Relative prices of food in the United States, weighted according to family consumption, 1890 to 1903 (Table 50).

The figures on which the sixteen charts are based are given in the following tables:

TABLE 49.—RELATIVE RETAIL PRICES OF VARIOUS ARTICLES OF FOOD, 1890 TO 1903.

[Average price for 1890 to 1899=100.]

Year.	Beef, fresh.	Butter.	Eggs.	Flour, wheat.	Lard.	Pork, fresh.	Pork, salt, bacon.	Pork, salt, ham.	Potatoes, Irish.	Sugar.
1890.....	99.2	99.2	100.6	109.7	98.2	97.0	95.8	98.7	109.3	118.6
1891.....	99.7	106.4	106.9	112.5	99.8	98.7	96.6	99.3	116.6	102.7
1892.....	99.5	106.8	106.8	105.1	103.6	100.5	99.1	101.9	95.7	96.2
1893.....	99.3	109.9	108.1	96.1	117.9	107.0	109.0	109.3	112.3	101.5
1894.....	98.3	101.7	96.3	88.7	106.9	101.8	103.6	101.9	102.6	93.8
1895.....	98.9	97.0	99.3	89.0	100.1	99.7	99.4	98.8	91.8	91.8
1896.....	99.3	92.7	92.8	92.7	92.5	97.4	96.7	97.6	77.0	96.6
1897.....	100.3	93.1	91.4	104.3	89.8	97.6	97.4	98.2	93.0	96.7
1898.....	101.9	95.1	96.2	107.4	93.9	98.6	100.2	95.1	105.4	101.3
1899.....	103.8	97.7	101.1	94.6	97.1	101.7	102.9	99.2	96.1	101.7
1900.....	106.5	101.4	99.9	94.3	104.4	107.7	109.7	105.3	93.5	104.9
1901.....	110.9	108.2	105.7	94.4	118.1	117.9	121.0	110.2	116.8	103.0
1902.....	118.6	111.5	119.1	94.9	134.3	128.3	135.6	119.4	117.0	96.0
1903.....	111.2	110.6	125.9	101.4	126.5	127.1	139.5	121.3	115.0	96.3

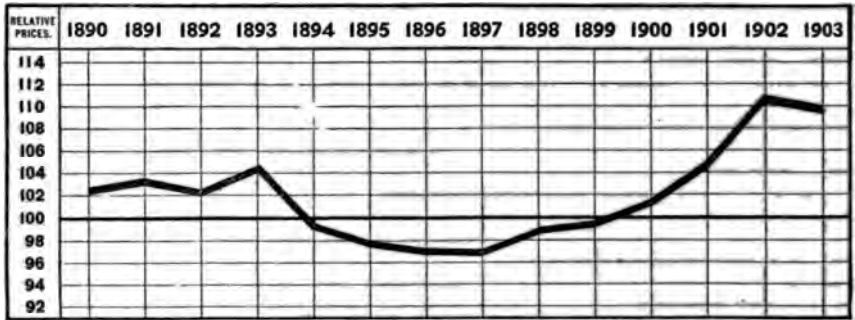
TABLE 50.—RELATIVE RETAIL PRICES OF FOOD WEIGHTED ACCORDING TO FAMILY CONSUMPTION, 1890 TO 1903.

[Average price for 1890 to 1899 = 100.]

Year.	North Atlantic States.	South Atlantic States.	North Central States.	South Central States.	Western States.	United States.
1890.....	102.3	101.2	102.3	102.1	107.7	102.4
1891.....	103.2	102.1	104.5	103.6	108.7	103.8
1892.....	102.1	101.1	101.8	100.7	105.2	101.9
1893.....	104.4	103.2	106.4	108.5	102.9	104.4
1894.....	99.2	100.0	100.6	100.0	99.3	99.7
1895.....	97.7	98.7	98.0	98.1	96.7	97.8
1896.....	97.0	96.8	94.6	96.1	93.2	95.5
1897.....	96.9	97.1	95.6	97.3	92.7	96.3
1898.....	98.8	99.3	98.4	98.8	95.2	98.7
1899.....	99.5	100.5	98.9	99.9	98.5	99.5
1900.....	101.2	102.4	100.8	101.1	98.1	101.1
1901.....	104.7	106.9	106.1	106.9	99.9	105.2
1902.....	110.5	111.8	111.7	113.5	104.4	110.9
1903.....	109.6	111.2	110.8	113.9	102.6	110.1

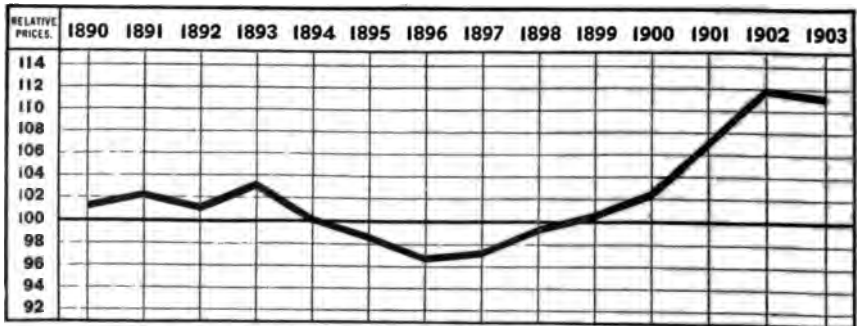
CHART 41.

[AVERAGE PRICE FOR 1890 TO 1899 = 100.]



**RELATIVE PRICES OF FOOD IN THE SOUTH ATLANTIC STATES,
WEIGHTED ACCORDING TO FAMILY CONSUMPTION, 1890 TO 1903.**

[AVERAGE PRICE FOR 1890 TO 1899 = 100.]



**RELATIVE PRICES OF FOOD IN THE NORTH CENTRAL STATES,
WEIGHTED ACCORDING TO FAMILY CONSUMPTION, 1890 TO 1903.**

[AVERAGE PRICE FOR 1890 TO 1899 = 100.]

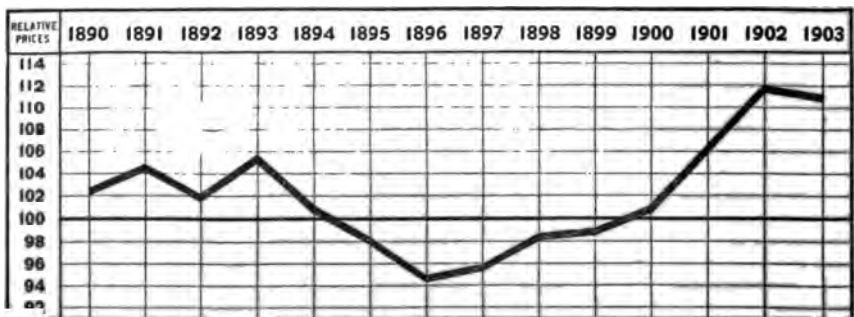


CHART 44.

**RELATIVE PRICES OF FOOD IN THE SOUTH CENTRAL STATES,
WEIGHTED ACCORDING TO FAMILY CONSUMPTION, 1890 TO 1903.**

[AVERAGE PRICE FOR 1890 TO 1899 = 100.]

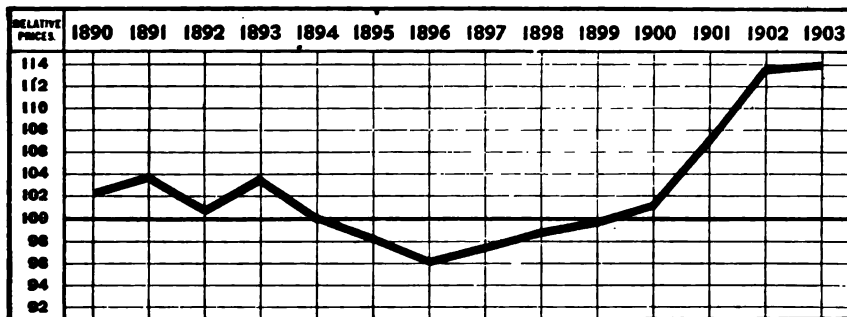


CHART 45.

**RELATIVE PRICES OF FOOD IN THE WESTERN STATES,
WEIGHTED ACCORDING TO FAMILY CONSUMPTION, 1890 TO 1903.**

[AVERAGE PRICE FOR 1890 TO 1899 = 100.]

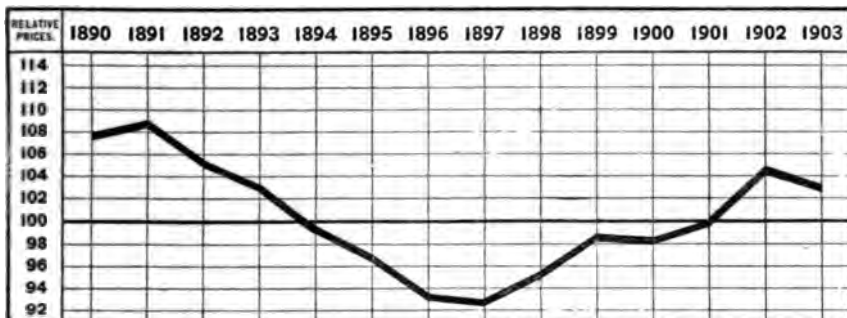
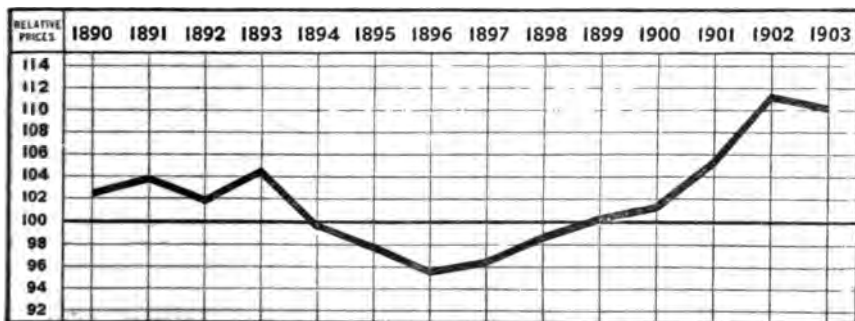


CHART 46.

**RELATIVE PRICES OF FOOD IN THE UNITED STATES,
WEIGHTED ACCORDING TO FAMILY CONSUMPTION, 1890 TO 1903.**

[AVERAGE PRICE FOR 1890 TO 1899 = 100.]



The relative prices weighted according to family consumption for the five geographical divisions and for the United States as a whole, as shown in the last table, are based on the retail prices ascertained from the books of 814 retail merchants, as previously stated, and a special inquiry, covering 2,567 families, into the quantity and cost of each of the various articles of food consumed during a year. The figures showing the average quantity and cost of the food consumed in the 2,567 families during the year are shown in the following table:

AVERAGE QUANTITY AND COST PER FAMILY OF THE VARIOUS ARTICLES OF FOOD CONSUMED.

Article.	Quantity.	Cost.
Fresh beef	349.7 pounds	\$50.05
Salt beef	48.6 pounds	5.26
Fresh hog products	114.2 pounds	14.02
Salt hog products	110.5 pounds	13.89
Other meat	77.7 pounds	9.78
Poultry	67.7 pounds	9.49
Fish	79.9 pounds	8.01
Eggs	85.2 dozen	16.79
Milk	354.5 quarts	21.32
Butter	117.1 pounds	28.76
Cheese	16.0 pounds	2.62
Lard	84.4 pounds	9.35
Tea	10.6 pounds	5.30
Coffee	46.8 pounds	10.74
Sugar	268.5 pounds	15.76
Molasses	3.6 gallons	1.69
Flour and meal	680.8 pounds	16.76
Bread	252.7 loaves	12.44
Rice	25.1 pounds	2.05
Potatoes	14.7 bushels	12.93
Other vegetables .....	.....	18.85
Fruit .....	.....	16.52
Vinegar, pickles, and condiments .....	.....	4.12
Other food .....	.....	20.40
Total food .....	.....	\$26.90

In this connection the following table is also of interest as showing the per cent of the total expenditure of these families that was disbursed for each of the principal items entering into the cost of living:

PER CENT OF THE AVERAGE TOTAL EXPENDITURE OF 2,567 FAMILIES DISBURSED FOR THE PRINCIPAL ITEMS ENTERING INTO THE COST OF LIVING.

Item.	Per cent.	Item.	Per cent.
Food	42.54	Charity	0.31
Rent	12.95	Furniture and utensils	3.42
Principal and interest on mortgage on home	1.58	Books and newspapers	1.09
Fuel	4.19	Amusements and vacation	1.60
Lighting	1.06	Intoxicating liquors	1.62
Clothing	14.04	Tobacco	1.42
Taxes	.75	Sickness and death	2.67
Insurance	2.73	Other purposes	5.87
Labor and other organization fees	1.17		
Religious purposes	.99		100.00

As stated in the Bulletin from which the data for these charts have been taken, the changes in cost of living as shown by the results of the investigation of the Bureau relate to food alone, and it is seen in

the above table that food represents 42.54 per cent of all family expenditures in the 2,567 families covered. The per cent of increase in the cost of food in 1903, the last year of the period, over 1896, the year of lowest prices, is shown to be 15.5 per cent. It is thus seen that food, constituting 42.54 per cent of family expenditures, shows an increase in cost of 15.5 per cent in 1903 as compared with 1896. An analysis of the remaining articles, constituting 57.46 per cent of family expenditure, leads to the conclusion expressed in the Bulletin that the increase in the retail prices of these articles, comparing 1903 with the year of lowest prices, did not reach that just given as the increase in cost of food, and that it is therefore a safe and conservative conclusion that the increase in the cost of living as a whole in 1903, when compared with the year of lowest prices was less than 15.5 per cent, the figures given as the increase in cost of food as shown by the investigation of the Bureau.

WHOLESALE AND RETAIL PRICES.

In conclusion, it should be stated that this investigation of the Bureau of Labor into retail prices was the first undertaken in this country which covered a long series of years. The wholesale price index of the Bureau, published annually in the March Bulletin and other collections of data relating to wholesale prices have been available for some years and have been used to some extent as indicating the trend of cost of living. It will readily be seen, however, that they do not represent accurately the cost to the small consumer. In their general trend retail prices usually follow the wholesale prices, but they are less sensitive, fluctuating within narrower limits and less rapidly. This is very well shown in the series of charts named in the following list:

CHARTS SHOWING WHOLESALE AND RETAIL PRICES.

1. Relative wholesale and retail prices of fresh beef, 1890 to 1903 (Table 51).
2. Relative wholesale and retail prices of butter, 1890 to 1903 (Table 51).
3. Relative wholesale and retail prices of eggs, 1890 to 1903 (Table 51).
4. Relative wholesale and retail prices of wheat flour, 1890 to 1903 (Table 51).
5. Relative wholesale and retail prices of lard, 1890 to 1903 (Table 51).
6. Relative wholesale and retail prices of bacon, 1890 to 1903 (Table 51).
7. Relative wholesale and retail prices of smoked ham, 1890 to 1903 (Table 51).
8. Relative wholesale and retail prices of Irish potatoes, 1890 to 1903 (Table 51).
9. Relative wholesale and retail prices of sugar, 1890 to 1903 (Table 51).
10. Relative wholesale and retail prices of food in the United States, 1890 to 1903 (Table 51).

The entire series of ten charts included in the above list are reproduced opposite page 1164. The data which form the basis of these graphic presentations are found in the following table, which shows

the relative wholesale and retail prices of the 9 articles of common consumption for each year of the period from 1890 to 1903, and also simple averages of relative figures, wholesale and retail, for all food:

TABLE 51.—RELATIVE WHOLESALE AND RETAIL PRICES OF VARIOUS ARTICLES OF FOOD, 1890 TO 1903.

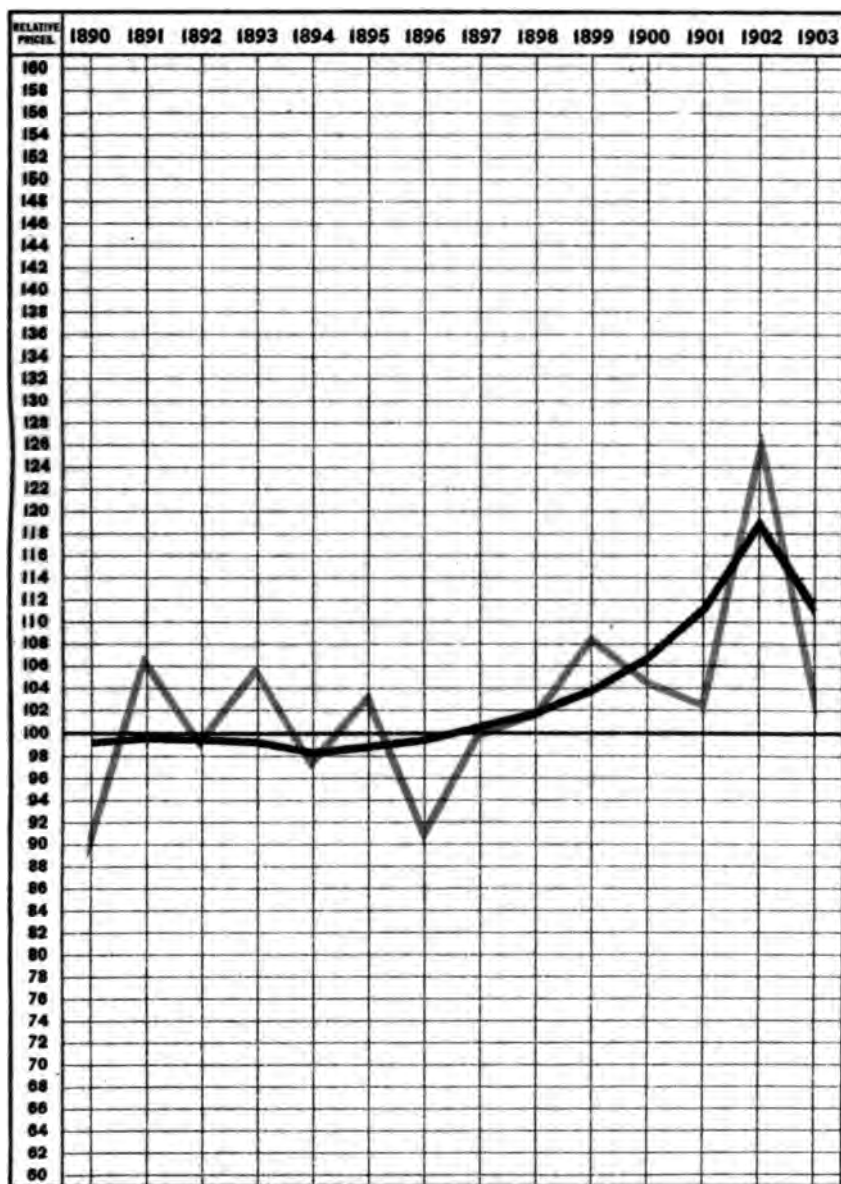
[Average price for 1890 to 1899=100.]

Year.	Beef, fresh.		Butter.		Eggs.		Flour, wheat.		Lard.	
	Whole-sale.	Retail.	Whole-sale.	Retail.	Whole-sale.	Retail.	Whole-sale.	Retail.	Whole-sale.	Retail.
1890.....	89.2	99.2	100.4	99.2	99.1	100.6	120.9	109.7	96.8	98.2
1891.....	106.2	99.7	116.1	106.4	110.0	106.9	125.6	112.5	100.9	99.3
1892.....	98.8	99.5	116.4	106.8	110.4	106.8	104.2	105.1	117.9	103.6
1893.....	135.4	99.3	121.3	109.9	114.5	108.1	89.3	98.1	157.5	117.9
1894.....	97.0	98.3	102.2	101.7	93.5	96.8	77.6	88.7	118.2	104.9
1895.....	102.7	98.9	94.5	97.0	102.0	99.3	84.4	89.0	99.8	100.1
1896.....	90.5	99.3	82.3	92.7	88.7	92.8	91.2	92.7	71.7	92.5
1897.....	93.7	100.3	84.1	93.1	87.5	91.4	110.1	104.3	67.4	89.8
1898.....	101.3	101.9	86.8	95.1	92.6	96.2	109.0	107.4	84.4	93.9
1899.....	108.3	103.8	95.8	97.7	101.6	101.1	87.9	94.6	85.0	97.1
1900.....	101.3	106.5	101.7	101.4	100.7	99.9	88.3	94.3	105.5	104.4
1901.....	102.1	110.9	97.7	103.2	106.7	105.7	87.4	94.4	135.3	118.1
1902.....	125.9	118.6	112.1	111.5	122.7	119.1	89.7	94.9	161.9	134.3
1903.....	101.7	111.2	105.7	110.6	123.2	125.9	97.1	101.4	134.1	120.6

Year.	Pork, salt, bacon.		Pork, salt, ham.		Potatoes, Irish.		Sugar.		All food (simple averages).	
	Whole-sale.	Retail.	Whole-sale.	Retail.	Whole-sale.	Retail.	Whole-sale.	Retail.	Whole-sale (54 articles).	Retail (30 articles).
1890.....	89.3	95.8	101.1	98.7	119.3	109.3	130.5	118.6	112.4	102.1
1891.....	103.7	96.6	99.8	99.3	154.9	116.6	99.7	102.7	115.7	103.4
1892.....	106.6	99.1	109.3	101.9	91.1	95.7	92.1	96.2	108.6	101.6
1893.....	154.7	109.0	126.9	109.3	134.5	112.3	102.3	101.5	110.2	104.1
1894.....	111.8	103.6	103.6	101.9	122.8	102.6	87.0	93.8	99.8	100.3
1895.....	96.3	99.4	96.2	98.8	86.7	91.8	87.9	91.8	94.6	88.2
1896.....	73.1	96.7	95.8	97.6	39.4	77.0	95.9	96.6	83.8	86.3
1897.....	79.9	97.4	90.9	98.2	65.7	93.0	95.1	95.7	87.7	84.3
1898.....	89.4	100.2	82.0	95.1	102.1	105.4	105.2	101.3	94.4	98.5
1899.....	85.8	102.9	93.8	99.2	83.6	96.1	104.2	101.7	98.3	99.6
1900.....	111.5	109.7	104.2	105.3	74.9	93.5	112.8	104.9	104.2	101.6
1901.....	132.3	121.0	109.2	110.2	113.0	116.8	106.8	103.0	105.9	105.6
1902.....	159.3	135.6	123.1	119.4	119.4	117.0	94.2	96.0	111.3	110.9
1903.....	142.6	139.5	129.2	121.3	105.2	115.0	98.2	96.3	107.1	110.8

RELATIVE WHOLESALE AND RETAIL PRICES OF FRESH BEEF, 1890 TO 1903.

[AVERAGE PRICE FOR 1890 TO 1899 = 100.]

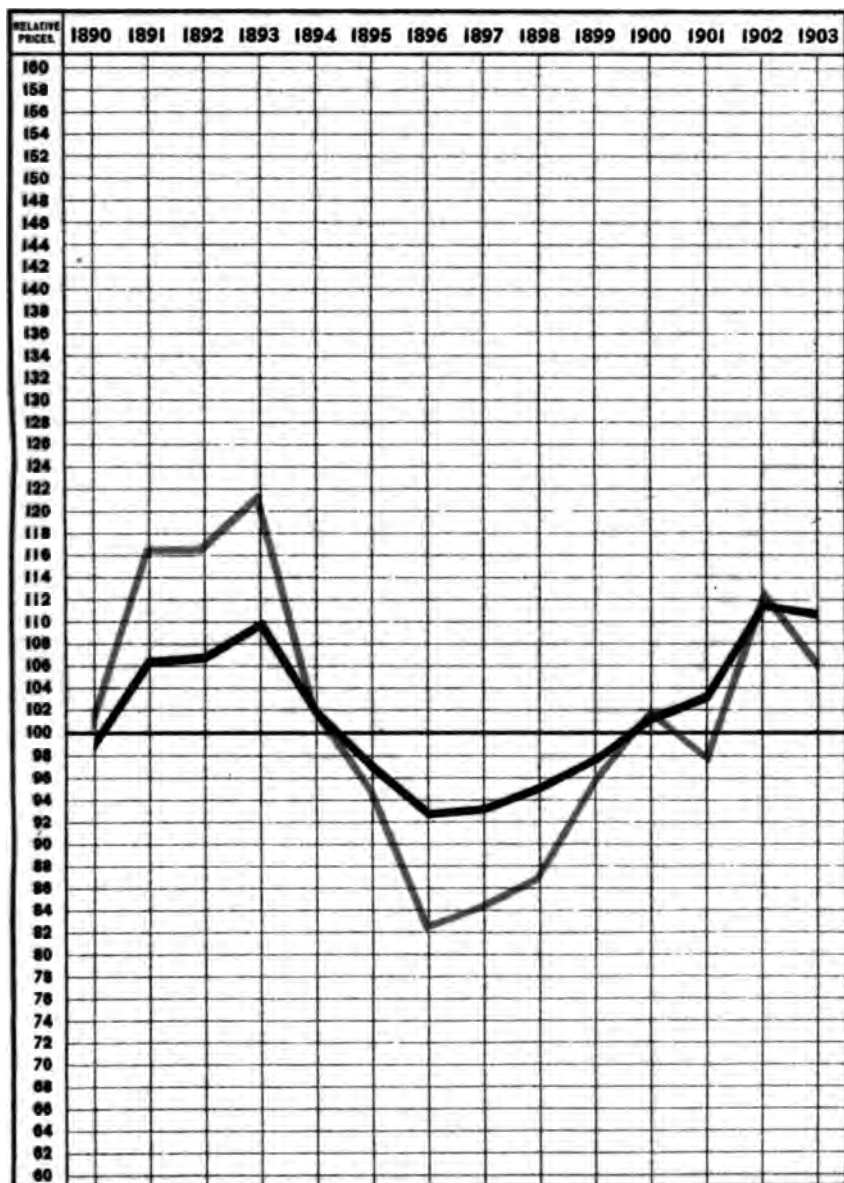


— = WHOLESALE PRICES. — = RETAIL PRICES.



RELATIVE WHOLESALE AND RETAIL PRICES OF BUTTER, 1890 TO 1903.

(AVERAGE PRICE FOR 1890 TO 1899 = 100.)

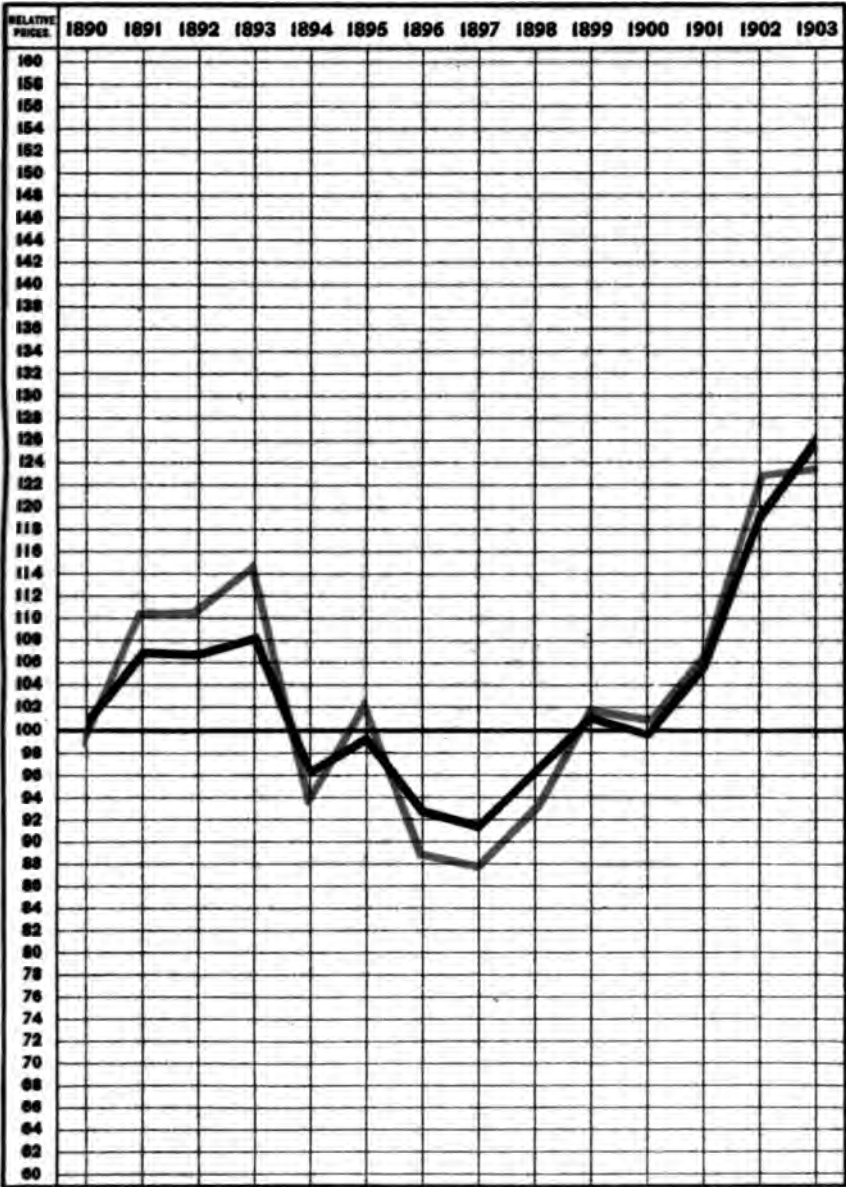


— = WHOLESALE PRICES. — = RETAIL PRICES.



RELATIVE WHOLESALE AND RETAIL PRICES OF EGGS, 1890 TO 1903.

(AVERAGE PRICE FOR 1890 TO 1899 = 100.)

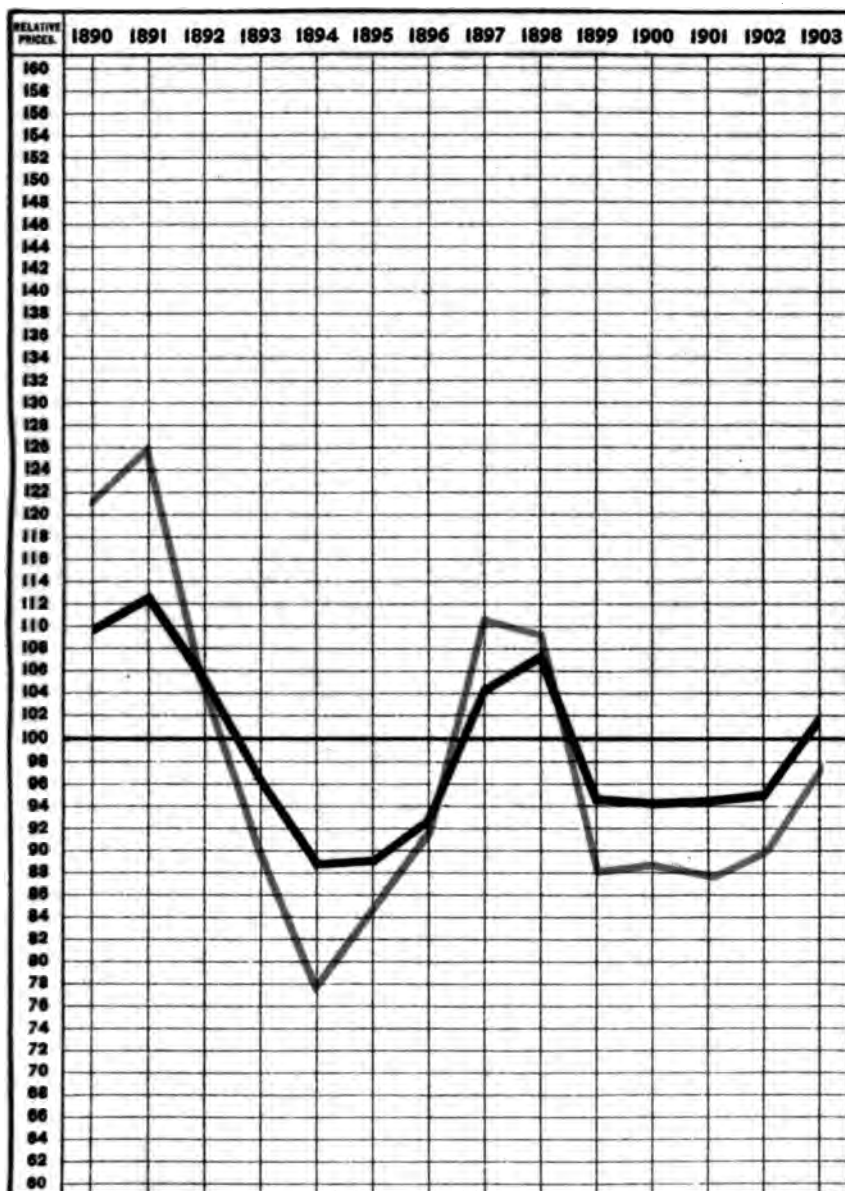


— = WHOLESALE PRICES. - - - = RETAIL PRICES.



RELATIVE WHOLESALE AND RETAIL PRICES OF WHEAT FLOUR, 1890 TO 1903.

[AVERAGE PRICE FOR 1890 TO 1899 = 100.]

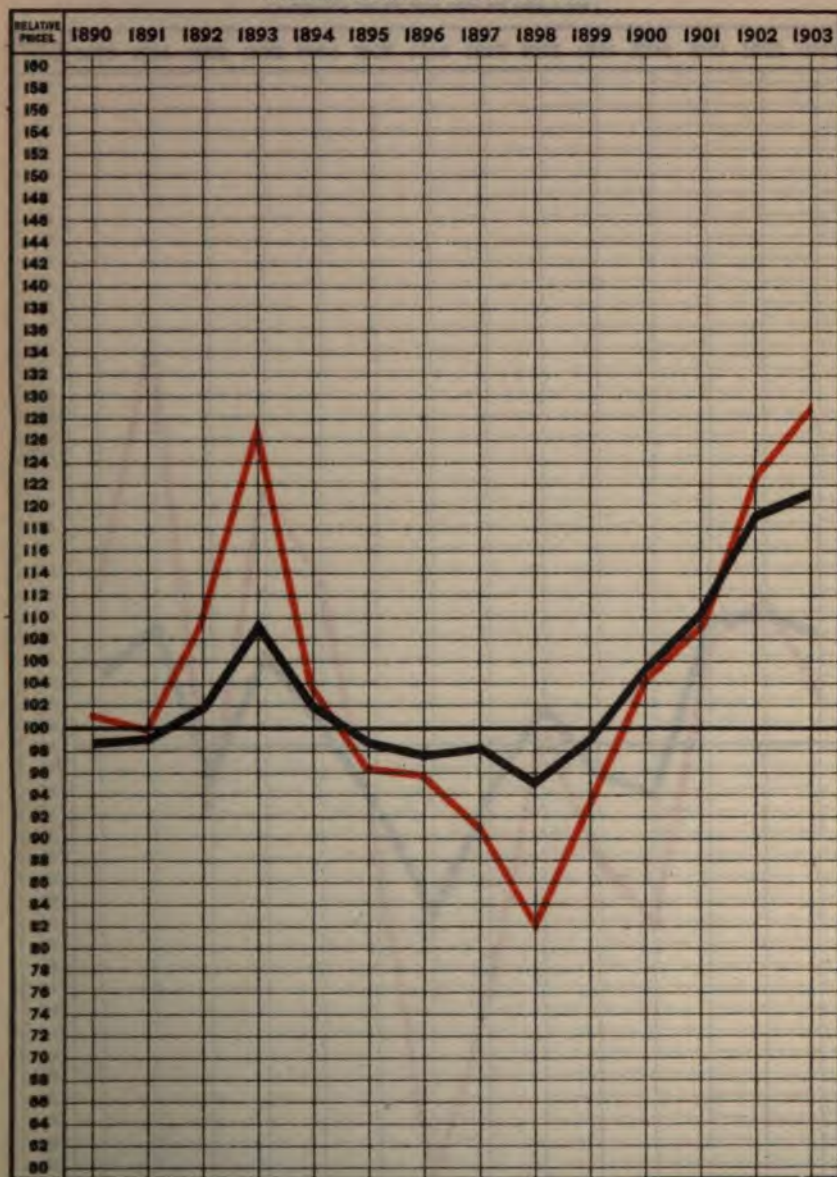


— = WHOLESALE PRICES. — = RETAIL PRICES.



RELATIVE WHOLESALE AND RETAIL PRICES OF SMOKED HAM, 1890 TO 1903.

[AVERAGE PRICE FOR 1890 TO 1899 = 100.]

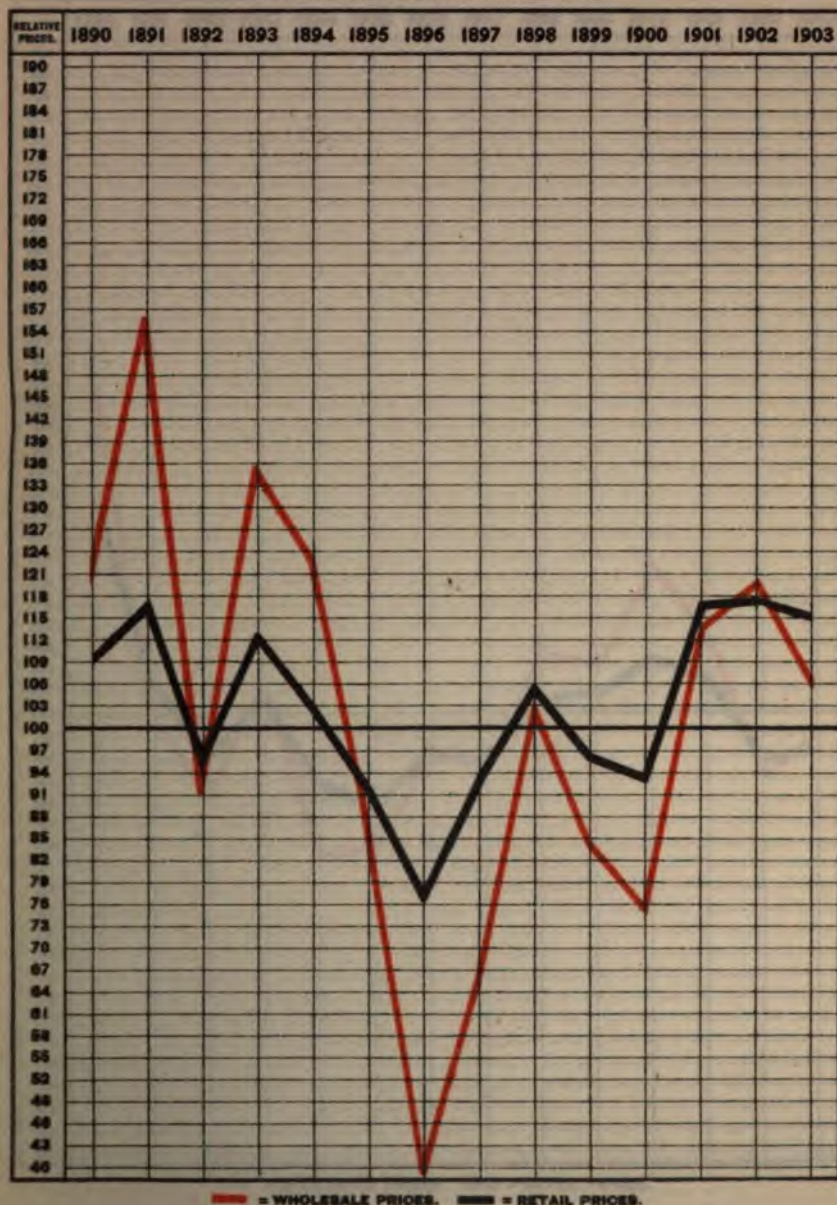


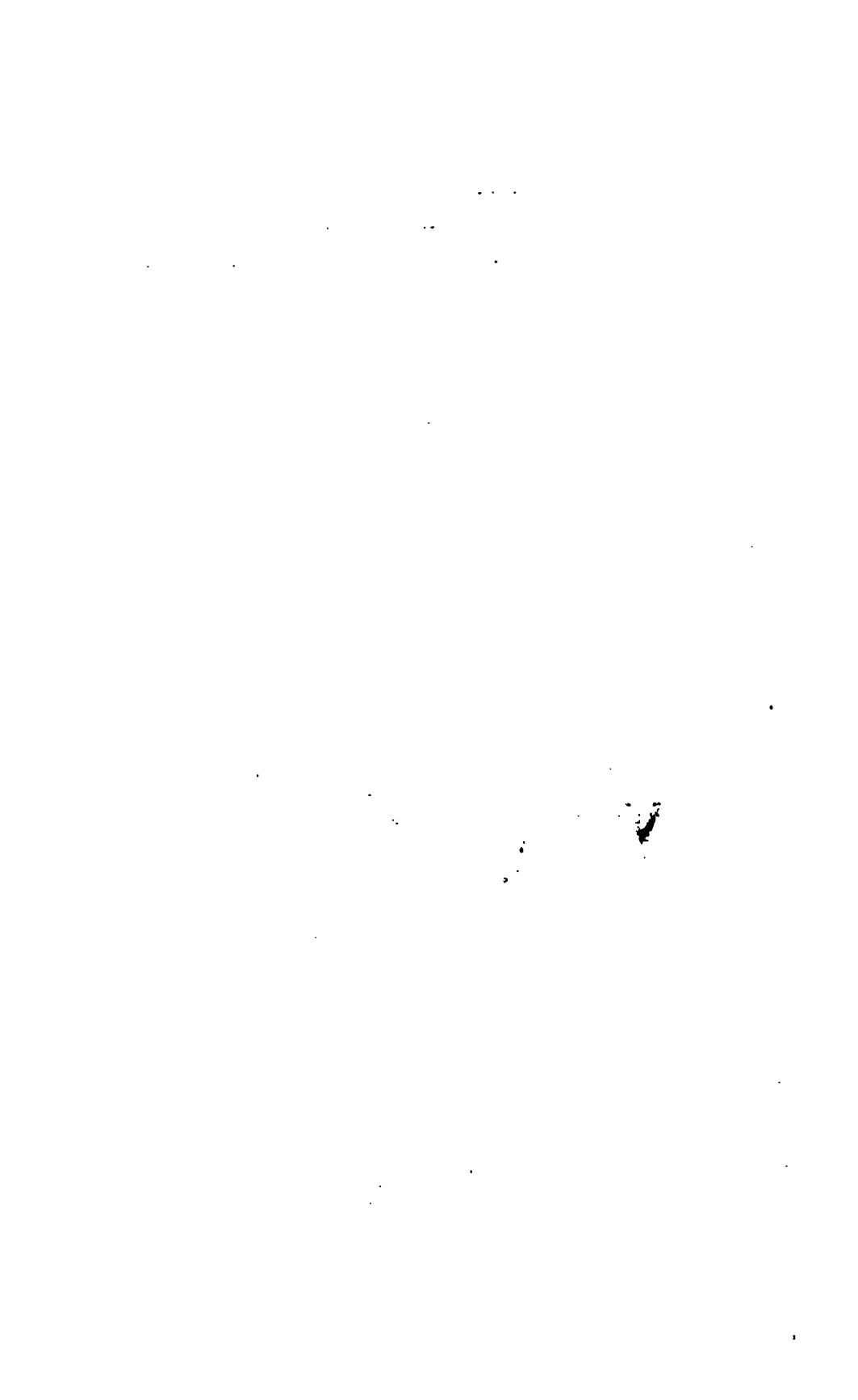
— = WHOLESALE PRICES. — = RETAIL PRICES.



RELATIVE WHOLESALE AND RETAIL PRICES OF IRISH POTATOES, 1890 TO 1903.

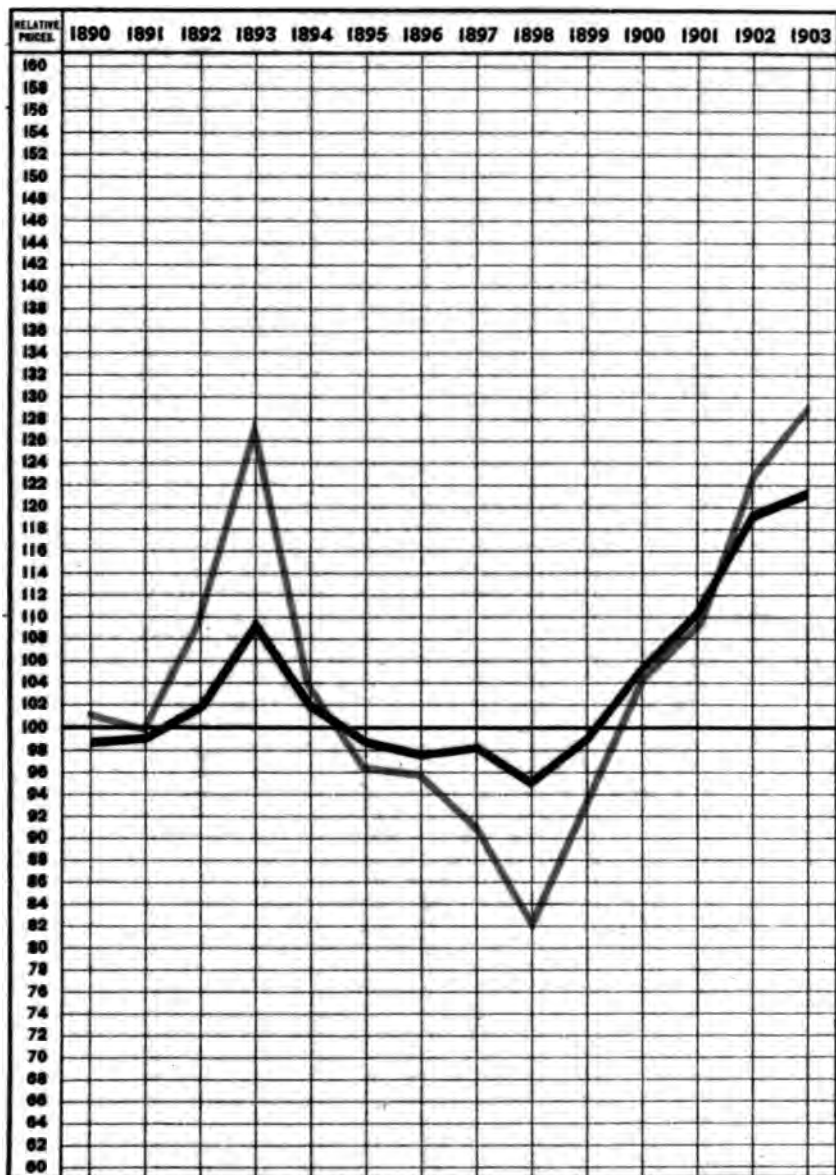
[AVERAGE PRICE FOR 1890 TO 1899 = 100.]





RELATIVE WHOLESALE AND RETAIL PRICES OF SMOKED HAM, 1890 TO 1903.

[AVERAGE PRICE FOR 1890 TO 1899 = 100.]



— = WHOLESALE PRICES. - - - = RETAIL PRICES.

WHOLESALE PRICES IN THE UNITED STATES, 1890 TO 1903.

BY G. W. W. HANGER.

In the year 1902 the Bureau of Labor established an index of wholesale prices in the United States similar to those carried on for many years in Great Britain and several countries on the Continent of Europe. It being the purpose of the Bureau to establish a permanent and representative index which might be continued from year to year along exactly similar lines, a thorough preliminary study was made of the most important indexes previously constructed and the methods adopted, in order to ascertain the advantages and disadvantages of each and to benefit to the fullest extent from previous experience.

While statisticians and economists are more or less familiar with the method, it may not be amiss to give, for the benefit of the general reader, an explanation of the significance of index numbers or relative prices as they are sometimes termed. Briefly, the term index number is applied to the method adopted to measure the variation from time to time in the prices of a group of commodities or of commodities generally. While variations in the prices of single commodities may readily be seen by the inspection of a series of quotations covering a period of years, it is not possible to measure the changes in the prices of a number of commodities, generally dissimilar in character, without first reducing the initial prices to a common basis. For example, the course of the price of wheat may readily be determined from an inspection of a series of quotations showing its average price per bushel for a series of years, but it would be quite impossible to measure the variations from year to year in the general price level of a group of commodities, such as wheat, steel rails, cotton sheetings, and coal, without first bringing the facts for each to some common basis. The method of index numbers accomplishes this by establishing the course of prices of each article as measured by some base or standard (for example, the average price for a single year or a period of years), usually expressing its average price for each year as a percentage of the average price for the year or period which has been adopted as the base or standard. These percentages, showing the variations based on a comparison of the price in each year with the year or period adopted as the base, while just as expressive of the variations

in the price of each commodity as the actual quotations, are especially valuable because they lend themselves readily to combination in order to secure information as to the variation in the general price level from year to year of all commodities considered.

Index numbers are used mainly to indicate the changes in the value of money from year to year. Sir R. Giffen, in the second report of the committee appointed for the purpose of investigating the best method of ascertaining and measuring variations in the value of the monetary standard (Report of the British Association, 1888) states the purposes for which this measurement is undertaken as follows:

1. The fixation of rents or other deferred payments extending over long periods of time, for which it has been desired to obtain a currency of a more stable sort than money is supposed to be.

2. To enable comparisons to be made between the value of money incomes in different places, which is often an object of great practical interest: not only to individuals contemplating residential changes, but also governments and other large spending bodies, spending money in widely distant places, having to consider this question.

3. To enable historians and other students making comparisons between past and present to give an approximate meaning to the money expressions which they deal with, and say roughly what a given fine, or payment, or amount of national revenue or expenditure in a past age would mean in modern language. To which some would add:

4. To afford a measure of the extent to which trade and industry have been injuriously affected by a variation in prices, and of the correction which it would be desirable to apply to the currency.

Mr. Fountain in the "Report on Wholesale and Retail Prices in the United Kingdom, in 1902," recently published by the board of trade of England, indicates two methods of approaching the subject, as follows:

The method of index numbers has been suggested or employed by persons regarding the phenomena of prices from two different standpoints. The first or theoretical point of view is closely bound up with the so-called "quantity theory" of money. The object of this group of investigators is, in general, to obtain some measure of the changes in prices due to changes in the quantity in circulation of the precious metal or metals constituting the monetary standard of any country for the time being. Jevons, for instance, who appears to have been the first to employ the method, or at least the first to elevate it to the rank of a scientific method, adopted it with the object of ascertaining the effect on prices of the great gold discoveries. The second or practical point of view has for its object the obtaining of some measure of the change in the purchasing power of money between two periods of time. For those who make use of the method from this point of view no theory as to the source of those changes is involved. It is apparent that there is considerable difference in the amount of the commodities that can be obtained, whether in the large markets or by the retail consumer, for a certain quantity of gold at the two epochs, and it is desired to measure this difference.

In the construction of an index number several considerations of great importance arise—such as the selection of a base or standard; the calculation of relative prices for individual articles and their combination into an index number for all commodities; the weighting of the different articles entering into the general index number; the selection of the commodities for which prices are to be included; the method of ascertaining the prices, etc. Bearing in mind that the index number or relative price of any given article at a given date is the percentage which the price of that article at that date is of the price of the same article at a date or during a period which has been selected as a base or standard, it is seen that a consideration of first importance is the selection of this base or standard. This varies greatly in the different indexes which have been presented to the public.

In the London Economist's index numbers the average price for the years 1845 to 1850, inclusive, is taken as the base; in those calculated by Mr. Sauerbeck, and published in the Journal of the Royal Statistical Society, the average for the eleven years 1867 to 1877 is taken; in Doctor Soetbeer's index numbers the average for the four years 1847 to 1850 is used, while in the United States Senate Finance Committee's statement of relative prices (Senate Report No. 1394, Fifty-second Congress, second session) the price for the year 1860 is taken as the base or standard. In order to secure the index number or relative price for any article at any date in the period covered, the price of the article for that date is divided by the price at the date or by the average price for the period selected as the base. The quotient obtained multiplied by 100 is the per cent that the price at that date is of the base or standard price, and is called the index number or relative price. For example, the percentage for flour in 1885 in Mr. Sauerbeck's series of index numbers is 63, meaning that the average price of flour in 1885 was 63 per cent of the average price of the same article during the base period (1867 to 1877). This base being always 100, a fall of 37 per cent is indicated.

These percentages having been made in the case of each separate article included in the particular scheme under consideration, and for each year of the period covered, a series of total index numbers or relative prices for each of the years covered is usually constructed by adding together the index numbers of all the articles for each year and dividing the result by the number of articles considered, thus securing an average of the same. This course has been followed by Sauerbeck, Soetbeer, the United States Senate Finance Committee, and some others. In the case of the London Economist index numbers, however, simply the sum of the index numbers of the individual articles is used. For example, the total of the index numbers for the base period (1845 to 1850) is 2,200, or the sum of the base figures (100) for the 22 articles

considered, and the total of the percentages for 1873 is 2,947. These sums, however, may be readily reduced to the average form given in other series of index numbers by dividing each by 22, the number of articles considered. It will be seen, then, that the index numbers or relative prices for all the commodities combined do not represent averages of the actual prices of such dissimilar commodities as a loaf of bread, a pound of meat, a ton of pig iron, etc., but are averages of the index numbers or relative prices of the articles.

Another subject that must be considered in the construction of an index number is the weight which is given to the various commodities in the calculation of the general index for all commodities. An examination of the most important index numbers shows that none of them is weighted in accordance with any exact principle, and while the matter may not be considered of prime importance in indexes in which a careful selection of articles has been made, the objection to giving equal weight to articles of very unequal importance is well founded and must be recognized, especially in the case of indexes comprising a comparatively small number of commodities. In the index of the *London Economist*, for example, but 22 commodities are included and some of these are of very small importance as articles of consumption or of commerce. This has been seen by the authors of this index and their tables are accompanied in every instance by the following note:

The total index number does not, of course, present a full and accurate representation of the variations of prices, inasmuch as it can not allow for the relative importance of the different articles. Wheat, for example, reckons for no more in the total index number than indigo; and during the years of the high price of cotton and cotton fabrics the total index number is, in a measure unduly raised by that special cause. Still, the total index number, read with the needful qualifications, may afford important inferences.

In the effort to remove the above objection, Mr. R. H. Inglis Palgrave endeavored, in a memorandum submitted in 1886 to the Royal Commission on the Depression of Trade and Industry, to weight the *Economist's* index numbers according to the relative importance of the commodities. For the new index numbers the average price for the years 1865 to 1869 is taken as the basis, instead of that for the years 1845 to 1850. The value of the quantity of each of the articles considered, annually consumed in the United Kingdom, is next calculated from its production and imports less exports. The value of the total annual consumption of these articles in each of the years considered is next found by simple addition. The consumption of each article in any given year is then divided by the total consumption of all articles in that year, a percentage being thus secured which represents the relative importance of the particular article as regards total consumption. The *Economist's* base sum of 2,200 is then multiplied by this per cent in order to bring the figures to a number which

will show the importance or weight of each article in a total of 2,200. The resulting numbers are then multiplied by the Economist's index numbers of the several articles for the year, reduced to the basis of the average price of the years 1865 to 1869, and the numbers thus obtained represent in the case of each article the index number for the year, weighted according to the importance of the consumption of the article as compared with the total consumption of the selected articles. These calculations may be understood more readily by means of an example. The following are the figures for 1885, showing the value of the consumption in the United Kingdom of the 19 articles used by Mr. Palgrave, the relative importance of that consumption, if the total consumption be represented as 2,200, and the index number for each article for 1885, on the basis of average price of the years 1865 to 1869, weighted according to the importance of the consumption of the article as compared with the total consumption of the selected articles:

INDEX NUMBERS WEIGHTED ACCORDING TO RELATIVE IMPORTANCE OF COMMODITIES
AS REGARDS CONSUMPTION IN 1885.

Article.	Value of consumption during the year 1885.	Relative importance of consump- tion in a total of 2,200.	Index number (basis of 1865-1869), each article weighted according to con- sumption.
Cotton, raw	£31,600,000	263	101
Silk	1,400,000	12	6
Flax and hemp	5,900,000	49	30
Wool	17,100,000	142	99
Meat	63,000,000	524	135
Iron	18,000,000	150	123
Copper	4,680,000	39	23
Lead	1,550,000	13	7
Tin	1,800,000	15	12
Timber	19,650,000	164	116
Tallow	3,340,000	28	24
Leather and hides	9,600,000	80	88
Indigo	600,000	5	6
Oils	5,900,000	49	34
Coffee	930,000	8	5
Sugar	17,920,000	149	79
Tea	8,500,000	71	49
Tobacco	3,500,000	29	30
Wheat and flour	49,350,000	410	242
	264,320,000	2,200	1,669

It is seen that the value of the total consumption of the 19 articles in 1885 was £264,320,000. The relative importance of any article—wheat and flour, for example—is found by dividing the consumption of that article (£49,350,000) by the total consumption (£264,320,000), giving a per cent of 18.67, which is in turn multiplied by 2,200 (the Economist base) to find its importance as regards that number. The result is 410, as given in the table under “Relative importance.” The figures for the other articles in the list are calculated in a similar manner. In the Economist's index numbers, in which each article is

given an equal importance, the drop in the price of wheat is shown to be 41 per cent from the base period (1865 to 1869), or, in other words, it is shown that the depression in price has sent the index number of that article down to 59.^(a) Therefore the index number of wheat weighted according to its relative importance in the consumption in 1885 is shown to be $59 \times \frac{11}{10}$, or 241.90, and is entered at 242. The new index numbers for the remaining articles are calculated in a similar manner, the total furnishing a new weighted index number for the year.

The following table gives for the years 1865 to 1885 the Economist's index numbers reduced to the basis of the average for the years 1865 to 1869, each commodity having equal weight, and the same index numbers as weighted by Mr. Palgrave according to the method just explained, together with percentages showing the results as based on 100 for the base period, 1865 to 1869. These latter are secured by dividing each total by 22, the number of articles considered.

COMPARISON OF ECONOMIST'S AND PALGRAVE'S INDEX NUMBERS, REDUCED TO SAME BASIS.

Year.	Economist's index numbers, each commodity having equal weight.		Palgrave's index numbers, each commodity weighted according to consumption.	
	Total.	Average.	Total.	Average.
1865	2,434	111	2,366	107
1866	2,449	111	2,434	111
1867	2,156	98	2,179	99
1868	1,982	90	2,058	94
1869	1,979	90	1,963	89
Average	2,200	100	2,200	100
1870	1,995	91	1,975	90
1871	1,981	90	2,046	93
1872	2,132	97	2,197	100
1873	2,237	102	2,298	104
1874	2,207	100	2,378	108
1875	2,098	95	2,125	97
1876	2,044	93	2,186	99
1877	2,064	94	2,205	100
1878	1,910	87	2,081	95
1879	1,676	76	1,806	82
1880	1,918	87	1,967	89
1881	1,782	81	2,054	93
1882	1,830	83	1,908	87
1883	1,755	80	1,924	88
1884	1,660	75	1,760	80
1885	1,550	70	1,669	76

This table shows that while in several years prices exhibit different tendencies, yet on the whole those differences are not great. The weighted average, however, is generally somewhat higher than the simple one. This index, it will be noted, is constructed according to

^a Mr. Palgrave states that "the Economist index number for January, 1885, gives 60, not 59; but as the average price of wheat for the year was below the January price, 59 has been taken as a more correct measure for a calculation extending over the entire year."

what has been termed the "fluctuating weights method" first suggested by Drobisch in 1871 in the *Jahrbuch für Nationalökonomie*. The obvious objection to this method, as first stated by Laspeyres and afterwards by Mr. Fountain, is that "a mere change in the proportion of the different articles consumed, without any alteration in the price of any of them, will lead to an alteration in the index number."

The "fixed weights method" of weighting, as explained by Mr. Arthur Ellis in a supplement to *The Statist* of June 8, 1878, consists in using fixed weights consisting of the average consumption in a single year or for a series of years. In his index the facts for the year 1869 are taken both for the base or standard price and for relative weights. In respect to this method Mr. Fountain states that "an index number constructed on this principle is at least capable of interpretation; for it measures the change in the amount of money that would have to be paid for certain articles, these articles representing, as nearly as possible, the national consumption in a certain mean year. If the items of national consumption may be supposed to remain practically constant over a period of years, this method is a good one so far as this period extends. But it is not fitted, without alteration, to comparisons over a considerable period of time."

While each of the 45 quotations comprised in the index numbers constructed by Mr. Augustus Sauerbeck is treated as being of equal importance, a certain weighting is roughly made by using a greater or less number of quotations according to the general importance of the commodity, which is determined by its consumption in the United Kingdom. Thus wheat is given 3 quotations—English wheat, American wheat, and flour—while barley, maize, etc., have but 1 quotation each. Two brands of coffee are quoted, but in computing averages for the group and for all commodities the mean of the two index numbers is taken, giving but the weight of a single quotation to this article. Other less important articles are treated in a similar manner. Great care seems to have been taken in this selection of articles, and the index numbers from time to time have been subjected to tests to determine their correctness in indicating the actual course of prices. The most important of these is based on the production in the United Kingdom of the articles considered at the prices used in these price tables, and the imports at board of trade values, thus measuring a considerable proportion by a different set of prices. According to this method the quantities in the United Kingdom for a given year or period are multiplied by the prices at that period in order to secure an "estimated actual value" for the period. These quantities are also multiplied by the average prices for the base period (1867 to 1877) to secure the "nominal values at average prices of 1867–1877." The new index number is then the per cent secured by dividing the value of the quantities consumed at the given date, at the prices for that date, by the

value of the same quantities at the base prices. The results of these calculations are shown in the following table, taken from the *Journal of the Royal Statistical Society*:

MOVEMENTS OF FORTY-FIVE COMMODITIES IN THE UNITED KINGDOM (PRODUCTION AND IMPORTS).

Year.	Estimated actual value in each period.	Nominal values at average prices of 1867-1877, showing increase in quantities.	Relative prices according to this table, 1867-1877 = 100.
1848-1850 (average).....	£219,800,000	£294,800,000	74.6
1851-1861 (average).....	350,100,000	382,700,000	91.5
1862-1871 (average).....	456,600,000	484,600,000	94.2
1871-1875 (average).....	548,800,000	526,300,000	104.5
1874-1876 (average).....	537,800,000	538,400,000	99.9
1876-1881 (average).....	489,700,000	578,500,000	84.6
1884-1886 (average).....	445,700,000	610,100,000	73.0
1889-1891 (average).....	504,100,000	685,200,000	73.6
1894-1896 (average).....	453,700,000	723,500,000	62.7
1896.....	461,200,000	743,000,000	62.0
1897.....	465,100,000	732,200,000	63.5
1898.....	498,700,000	772,400,000	64.6
1899.....	519,800,000	772,500,000	67.3
1900 (a).....	593,200,000	762,800,000	78.6

a 1900 subject to correction after publication of the complete mineral produce returns.

From the table it is seen that in the earlier years the average for periods is used, while since 1896 that for each year is given. Columns 2 and 3 are calculated in the manner heretofore explained. Column 4 is secured by dividing column 2 by column 3, and, as explained, represents the new index numbers weighted according to production and imports. These do not differ greatly from the simple index numbers. For example, the average of the simple index numbers for the years 1884 to 1886 is 72.3 as against 73 for the weighted index number; for 1889 to 1891 it is 72 as against 73.6; for 1894 to 1896 it is 62 as against 62.7; for 1896 it is 61 as against 62; for 1897 it is 62 as against 63.5; for 1898 it is 64 as against 64.6; for 1899 it is 68 as against 67.3, while for 1900 it is 75 as against 78.6.

An examination of the above statements with reference to the weighted and unweighted indexes of the *London Economist* and of Mr. Sauerbeck, as well as the testimony of prominent statisticians and economists leads to the conclusion that with a careful selection of the commodities to be included in an index with a view to giving approximately greater importance to those entering most largely into consumption and commerce, the unweighted index will differ from the weighted but slightly even in the extent of variation from year to year, while almost without exception the movement will be in the same direction. Sir R. Giffen, in the report of the committee previously referred to, gives expression to the following conclusion in regard to the matter of weighting:

The articles as to which records of prices are obtainable being themselves only a portion of the whole, nearly as good a final result

may apparently be arrived at by a selection without bias, according to no better principle than accessibility of records, as by a careful attention to weighting. * * * Practically the committee would recommend the use of a weighted index number of some kind, as, on the whole, commanding more confidence. * * * A weighted index number, in one aspect, is almost an unnecessary precaution to secure accuracy, though, on the whole, the committee recommend it.

In the memorandum prepared by Mr. Fountain for the "Report on Wholesale and Retail Prices in the United Kingdom in 1902," before referred to, the following statement is made as the result of his study of the subject:

Laspeyres, too, in his paper in the *Jahrbuch für Nationalökonomie* for 1871, considers that, having regard to the doubts introduced by doubtful price quotations, the slight difference between the weighted and unweighted mean is not of sufficient practical importance to justify the additional trouble involved in making use of the former. Again, in the reports on the prices of imports and exports, elsewhere referred to, a large number of systems of weighting are given; but it is found that the practical effect of adopting one rather than the other is very slight. In fact, in normal years, when nothing of an exceptional character occurs to affect to any great extent the general level of prices, the adoption of a scientific system of weighting is desirable rather for the purpose of anticipating theoretical criticism than because of the practical difference in the result.

As regards the sources of the price quotations which serve as the basis of the various indexes it may be stated that in most cases market prices have been used. The London Economist index, for example, is based on "trade prices current," or wholesale prices as reported for Friday of each week by responsible firms engaged in trade in the London and Manchester markets. Sauerbeck's index is based on prices for wholesale transactions collected by Mr. Sauerbeck himself either from trustworthy trade journals or from leading firms in various lines of trade. The index of the United States Senate Finance Committee was likewise based on wholesale prices secured in most instances directly from the books of merchants and manufacturers, the exceptions being those obtained from trade journals, large buyers, etc. The prices which served as the basis for the index number were usually prices for a given date (as January 1, April 1, July 1, or October 1) of each year, although in a few instances they were average prices for the year. The index number of Dr. Adolf Soetbeer, on the other hand, was based on the prices of the bureau of commercial statistics of Hamburg. The following statement explains the method of ascertaining these prices and indicates their special value for purposes of comparison:

All goods imported into Hamburg are reported to the bureau of commercial statistics. These reports contain a statement of the kind of goods and their weight, to which is added their value, calculated by

the price of the article upon the day in question on the Hamburg exchange. For goods not quoted on the exchange the invoice value, plus freight, insurance, and other charges, must be given. The yearly trade statements are made up from these reports. Having the total quantity and total value, the calculation of the average price is a simple arithmetical calculation. But in view of the peculiar circumstances of Hamburg as a free harbor, and of the fact that the declared values are based on ruling Hamburg prices, the results have a high value quite unusual for import prices.

BUREAU OF LABOR INDEX NUMBER.

The index number established by the Bureau of Labor in 1902 and published in the March Bulletin of that year (No. 39) covered the period from 1890 to 1901, inclusive. As originally proposed, this index has been continued along exactly similar lines each year since its inception. The second statement, including data for the year 1902, appeared in the Bulletin for March, 1903 (No. 45); and the third, including data for the year 1903, appeared in the Bulletin for March, 1904 (No. 51). The following description of the most important features of this index and the methods adopted in connection therewith is drawn largely from explanatory matter prepared to accompany the figures as published in Bulletins 39, 45, and 51.

The price data which constitute the basis of the Bureau of Labor index consist of 250 series of quotations for the entire period covered, 1890 to 1903, and 10 additional series for some portion of the period. Although commodities of great importance are represented by more than one series of quotations, no article of a particular description has been so represented. For example, wheat flour is represented by two series of wheat quotations, "spring patents" and "winter straights," each of these particular descriptions of flour, however, being represented by but one series of quotations.

After a careful consideration of the various methods of weighting prices it was thought impossible as well as inadvisable to attempt the adoption of any of the methods heretofore proposed. Under these circumstances it was realized that the greatest care must be exercised in the choice of the commodities to be included in order that a simple average of their relative prices should fairly represent the general price level. Only important and thoroughly representative articles in each group were therefore selected, and the number included (260) is larger than has heretofore been used in similar compilations, it being recognized that the use of a large number of articles carefully selected minimizes the effect on the general price level of an unusual change in the price of any one article or of a few articles.

It has been indicated that more than one series of quotations have

been used in the case of commodities of great importance. This has been done for the purpose of roughly giving a greater weight to these important commodities for the want of any other satisfactory method of accomplishing this object. The same means have been employed satisfactorily by Sauerbeck in his index, as previously explained, and the approximate accuracy of the method has been proved by various tests based on the amount of production, etc. Allusion has already been made to the various methods of weighting which have been adopted in connection with previous compilations of relative prices. The method employed by some European statisticians of measuring the importance of each commodity by its annual consumption by the nation is impossible of use in this country, owing to the lack of even approximately accurate figures for the annual consumption in the United States of most of the commodities included in the Bureau's index. While the method adopted by the Bureau of using a large number of representative staple articles and selecting them in such a manner as to make them, to a large extent, weight themselves may be open to objection, it is believed that the results secured thereby are, on the whole, quite satisfactory. Upon a casual examination it may appear that under this method a comparatively unimportant commodity—such, for instance, as cotton-seed meal—has been given the same weight or importance as one of the more important commodities, such as wheat. A closer examination, however, shows that cotton-seed meal enters into no other commodity included in the index, while wheat is not only quoted as a raw material, but enters into the two descriptions of wheat flour, the two descriptions of crackers, and the three descriptions of loaf bread.

The commodities covered by the 260 series of quotations are classified under 9 general groups, as follows:

- Farm products, 16 series of quotations.
- Food, etc., 54 series of quotations.
- Cloths and clothing, 76 series of quotations.
- Fuel and lighting, 13 series of quotations.
- Metals and implements, 38 series of quotations.
- Lumber and building materials, 27 series of quotations.
- Drugs and chemicals, 9 series of quotations.
- House furnishing goods, 14 series of quotations.
- Miscellaneous, 13 series of quotations.

The prices used in this index are invariably those for wholesale transactions. In this connection it may be appropriate to state that while wholesale prices have been used by some to indicate the trend of cost of living, it is obvious that the only correct measure of the extent of increase and decrease in cost of living from year to year is found in the quotations of retail prices or the actual prices paid by the small consumer. Until recently no adequate collection of retail prices covering a long series of years was available for the United

States, and wholesale prices were sometimes erroneously used to indicate the extent of increase and decrease in the cost of living. The Bureau has, however, also established a retail price index for the purpose of ascertaining more accurately the extent of variation from year to year in the cost of living of workingmen's families. The concrete results of this very complete collection of retail prices by the Bureau of Labor are now available, having been published in the Bulletin of the Bureau for July, 1904 (No. 53), and the detailed facts will shortly appear in its forthcoming Eighteenth Annual Report. The present Bulletin reproduces the summary figures in connection with the description of the charts relative to cost of living and retail prices and a comparison of the course of wholesale as compared with the retail prices of food is shown in both tabular and graphic form on page 1164. This comparison shows that the wholesale are more sensitive than the retail prices and more quickly reflect changes in conditions. It is true that the latter usually follow the former, but generally not in the same proportion. The margin between them in the case of some commodities is so great that slight variations in the wholesale price do not affect the retail, and variations in the former which last for a short time only do not usually result in corresponding variations in the latter.

The sources of the price quotations included in the index of wholesale prices, now being considered, are standard trade journals, officials of boards of trade, chambers of commerce and produce exchanges, and leading manufacturers or their selling agents. The quotations are usually those for the New York market, except for such commodities as have their primary market in some other locality. For grains, live stock, etc., for example, Chicago prices are quoted; for fish, except salmon, Boston prices; for tar, Wilmington, N. C., prices; for white pine, Buffalo prices, etc. The prices for textiles are those in the great distributing markets, such as New York, Philadelphia, and Boston. Of the 260 quotations included, 126 were for the New York market, 20 for the Chicago market, and 76 for the general market, the small number remaining being for other localities representing the primary markets of the various commodities. In this connection it should be stated that special care was taken in the case of each commodity to secure prices throughout the period for an article of precisely the same kind and grade. In order that the average for each year might be fairly representative, weekly quotations were secured in the case of all articles subject to frequent fluctuation in price, such as butter, cheese, eggs, grain, live stock, meats, etc. In the case of articles whose prices are more stable, however, monthly or annual quotations were taken. Of the 260 indexes of commodities included in the general price index, 38 are based on weekly, 211 on monthly, and 11 on annual quotations. The average price for the year in each case is

obtained by simply dividing the sum of the quotations for a given commodity by the number of quotations secured. Where a range of prices was shown, the mean price for each date was found and this was used in computing the yearly average. It is of course understood that the construction of a strictly scientific average price for the year would involve the consideration of data as to the quantity marketed and the price for which each unit of quantity was sold. It is, however, manifestly impossible to secure these details, and even were it possible the work of compilation would not be justified by the results. It is believed that the method adopted, which is also that quite generally used in the construction of other index numbers, secures results which are quite as valuable for all practical purposes.

Having considered the method of collecting the quotations for the commodities selected for inclusion in the index and of computing yearly averages therefrom, it is important to consider also the method of calculating the index numbers or relative prices for each commodity and their combination into indexes representing groups of commodities or commodities as a whole. The first step in the reduction of a series of actual prices to relative prices is the adoption of a base or standard price with relation to which the prices for each year may be expressed. The relative price or index price of a commodity for each year is, therefore, the price expressed as a percentage of this base, the results being obtained by dividing the average price for each year by the base or standard price. This base or standard may be either the average price for a single year or the average for two or more years. If the price for a single year be adopted, it is essential that the year be a normal one so far as prices are concerned, for if, on the one hand, prices are high in the year adopted as the base, any subsequent fall will be unduly emphasized, while, on the other hand, if prices are low any subsequent rise will be emphasized. Upon examination of the prices of the 260 commodities included in this index it was seen that an entirely normal condition as regards prices of all commodities was not presented in any one year in the period. For this reason it was decided that the average price for a number of years would better reflect average or approximately normal conditions, and form a more satisfactory base than would the price for any single year. The period adopted as the base is that from 1890 to 1899—a period of ten years—and the average price for this period, or the base price, was found by adding together the average prices for all of the ten years and dividing the sum by 10. As already stated, the relative prices are calculated in the usual manner by dividing the average price for each year by the average price for the base period, the results representing simply the percentage which the price for each year is of the base price. The base price always represents 100 under this method, and the percentages for each year enable one to measure readily the rise

and fall from year to year of the prices of any single commodity. In order to secure the relative prices or index numbers of a group of commodities, or of all commodities, the sum of the relative prices for each year is divided by the number of commodities or quotations.

EXHIBIT CHARTS.

The exhibit of the Bureau at the Louisiana Purchase Exposition, so far as wholesale prices are concerned, consists of three series of charts. The first series shows the trend of the relative prices or index numbers of the eight important groups of commodities, of raw and manufactured products compared, and of all commodities, the period covered in each case being the years from 1890 to 1903, inclusive; in the second series of charts a comparison is shown of the relative prices or index numbers of certain groups of related articles; while in the third series a comparison is made of the actual prices of certain groups of related articles.

The following is a list of the first series of charts, indication being given in each case of the table which furnishes the figures on which it is based:

Relative prices of farm products, 1890 to 1903 (Table 1).

Relative prices of food, etc., 1890 to 1903 (Table 1).

Relative prices of cloths and clothing, 1890 to 1903 (Table 1).

Relative prices of fuel and lighting, 1890 to 1903 (Table 1).

Relative prices of metals and implements, 1890 to 1903 (Table 1).

Relative prices of lumber and building materials, 1890 to 1903 (Table 1).

Relative prices of drugs and chemicals, 1890 to 1903 (Table 1).

Relative prices of house furnishing goods, 1890 to 1903 (Table 1).

Relative prices of raw and manufactured commodities, 1890 to 1903 (Table 2).

Relative prices of all commodities, 1890 to 1903 (Table 1).

Reproductions of the above ten charts are given on the opposite page. The tables presenting the figures on which these charts were based follow:

TABLE 1.—SUMMARY OF RELATIVE WHOLESALE PRICES OF COMMODITIES, 1890 TO 1903, BY GROUPS.

[Average price for 1890-1899=100.]

Year.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and implements.	Lumber and building materials.	Drugs and chemicals.	House furnishing goods.	Miscellaneous.	All commodities.
1890.....	110.0	112.4	113.5	104.7	119.2	111.8	110.2	111.1	110.3	112.9
1891.....	121.5	115.7	111.3	102.7	111.7	108.4	103.6	110.2	109.4	111.7
1892.....	111.7	103.6	109.0	101.1	106.0	102.8	102.9	105.5	105.2	106.1
1893.....	107.9	110.2	107.2	100.0	100.7	101.9	100.5	104.9	105.9	105.6
1894.....	95.9	99.8	96.1	92.4	90.7	96.3	89.8	100.1	99.8	96.1
1895.....	93.3	94.6	92.7	98.1	92.0	94.1	87.9	96.5	94.5	93.6
1896.....	78.3	83.8	91.3	104.3	93.7	93.4	92.6	94.0	91.4	90.4
1897.....	85.2	87.7	91.1	96.4	86.6	90.4	94.4	89.8	92.1	89.7
1898.....	96.1	94.4	93.4	95.4	86.4	95.8	106.6	92.0	92.4	93.4
1899.....	100.0	98.3	96.7	105.0	114.7	105.8	111.3	95.1	97.7	101.7
1900.....	109.5	104.2	105.8	120.9	120.5	115.7	115.7	106.1	109.8	110.5
1901.....	116.9	105.9	101.0	119.5	111.9	116.7	115.2	110.9	107.4	108.5
1902.....	150.5	111.3	102.0	134.3	117.2	118.8	114.2	112.2	114.1	112.9
1903.....	118.8	107.1	105.6	149.3	117.6	121.4	112.6	113.0	113.6	113.6

RELATIVE PRICES OF FARM PRODUCTS, 1890 TO 1903.

[AVERAGE PRICE FOR 1890 TO 1899=100.]

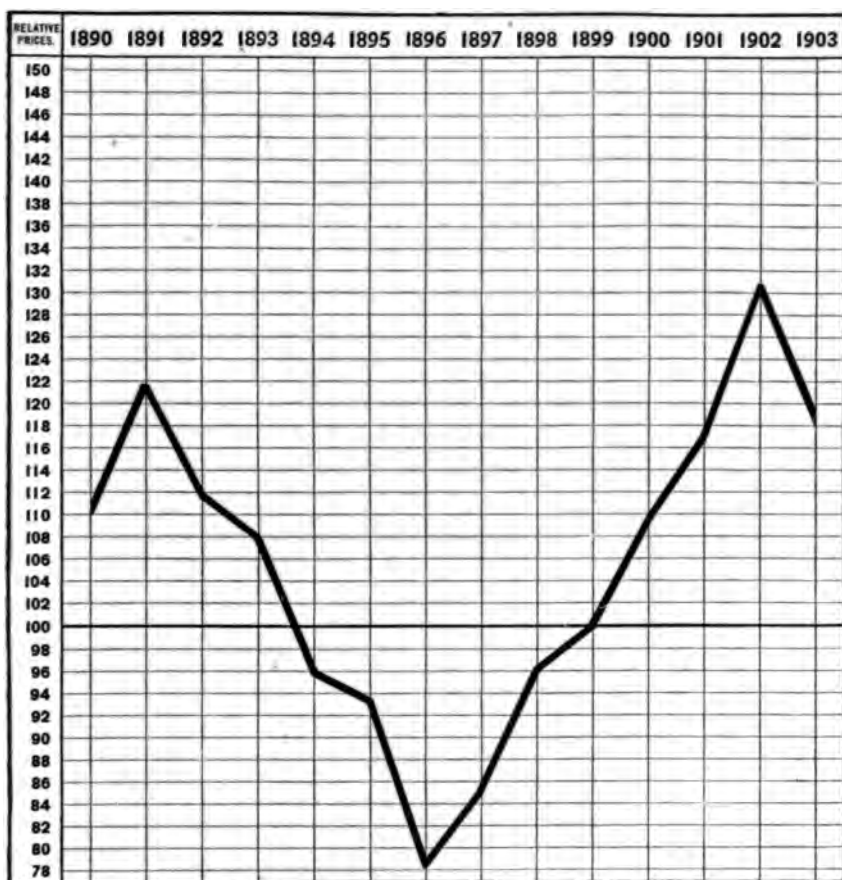


CHART 57



RELATIVE PRICES OF FOOD, ETC., 1890 TO 1903.
[AVERAGE PRICE FOR 1890 TO 1899=100.]

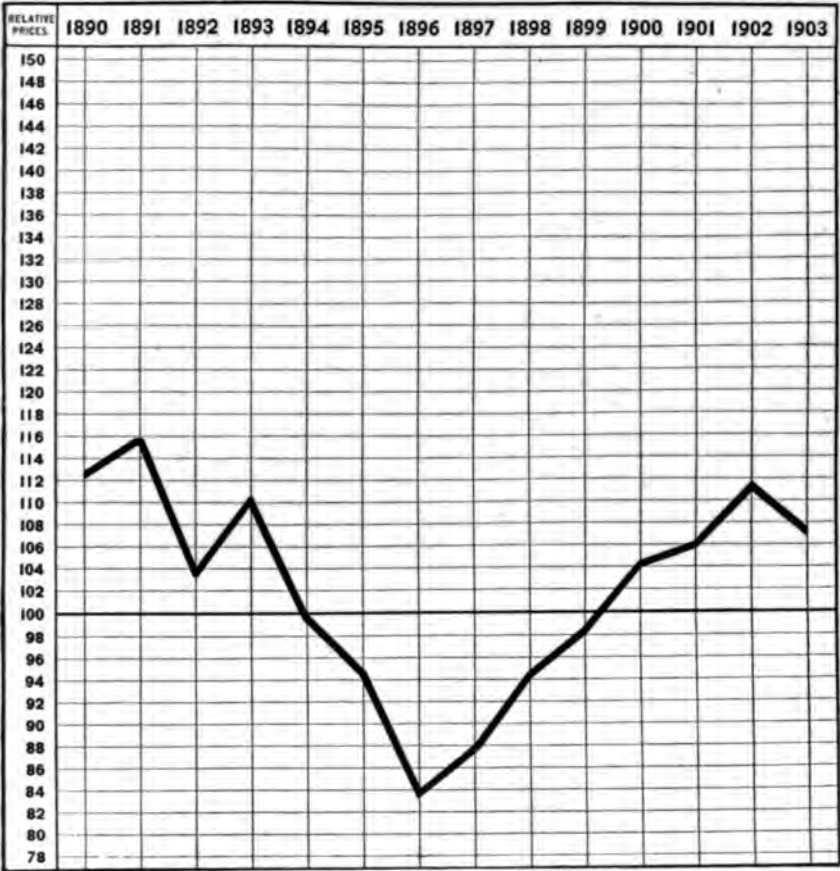
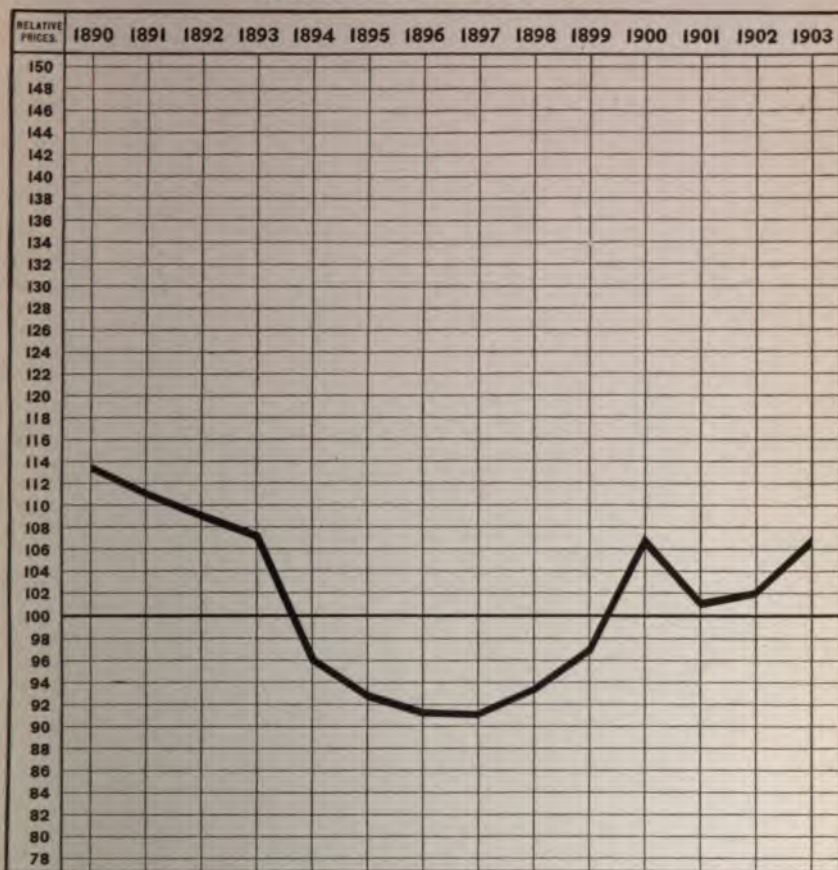


CHART 58

RELATIVE PRICES OF CLOTHS AND CLOTHING, 1890 TO 1903.

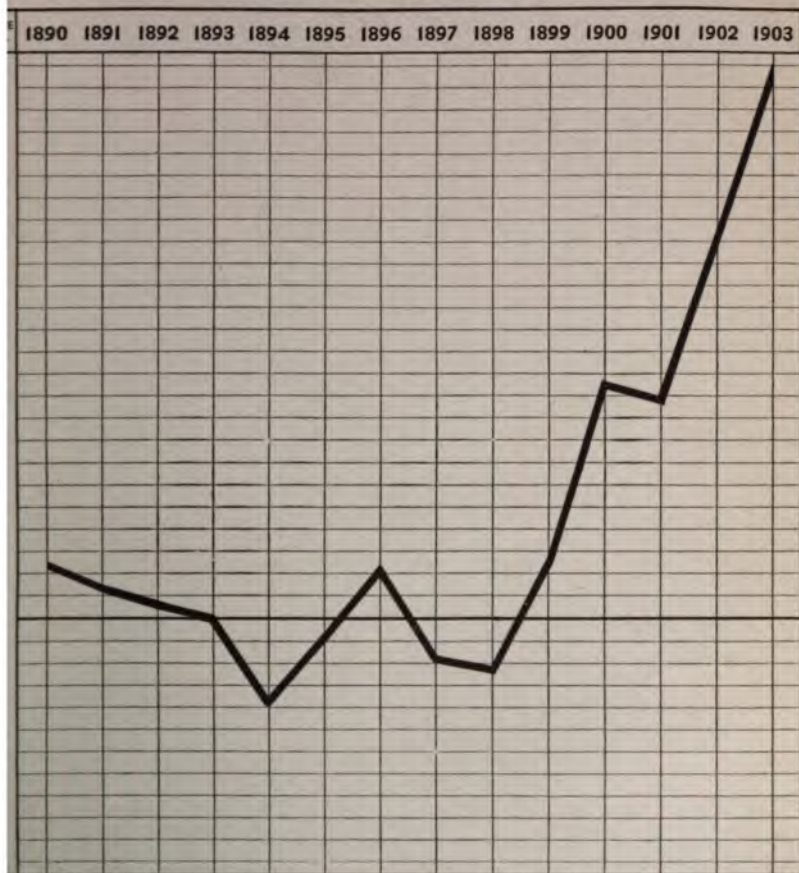
(AVERAGE PRICE FOR 1890 TO 1899 = 100.)





RELATIVE PRICES OF FUEL AND LIGHTING, 1890 TO 1903.

(AVERAGE PRICE FOR 1890 TO 1899 = 100.)



1

RELATIVE PRICES OF METALS AND IMPLEMENTS, 1890 TO 1903.

(AVERAGE PRICE FOR 1890 TO 1899 = 100.)

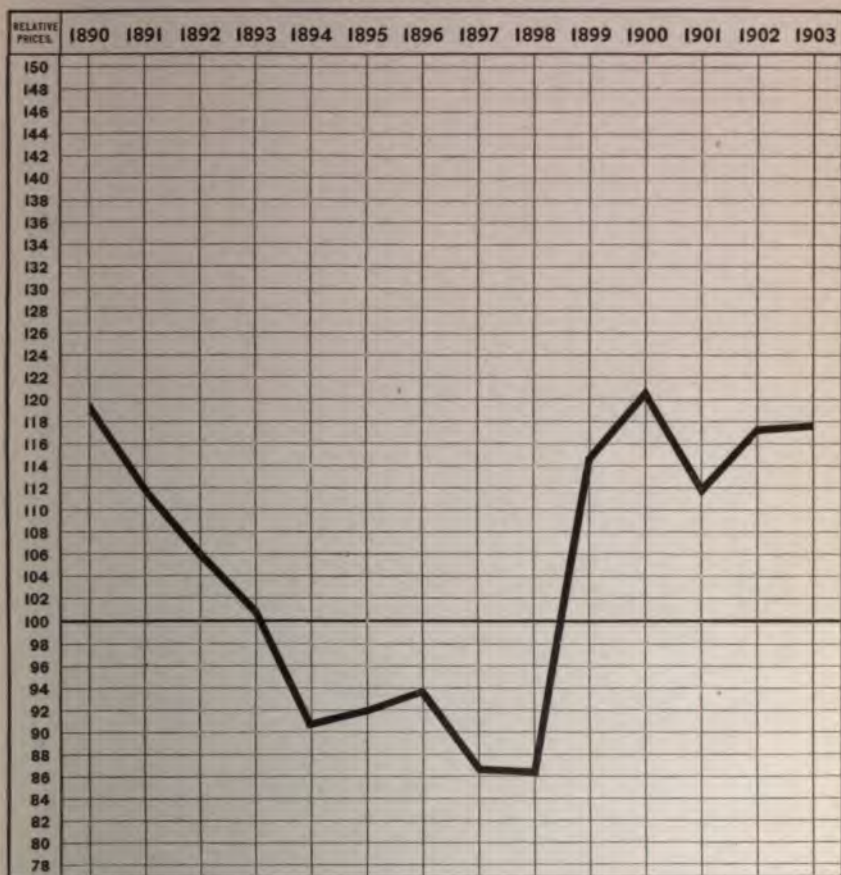
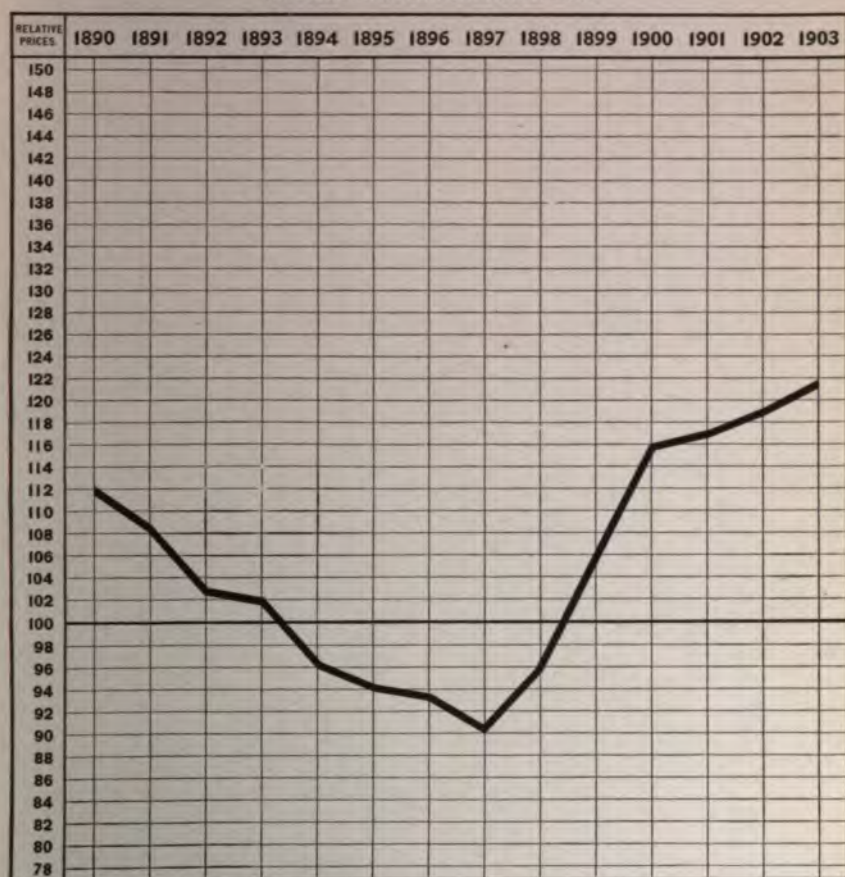


CHART 61

RELATIVE PRICES OF LUMBER AND BUILDING MATERIALS, 1890 TO 1903.

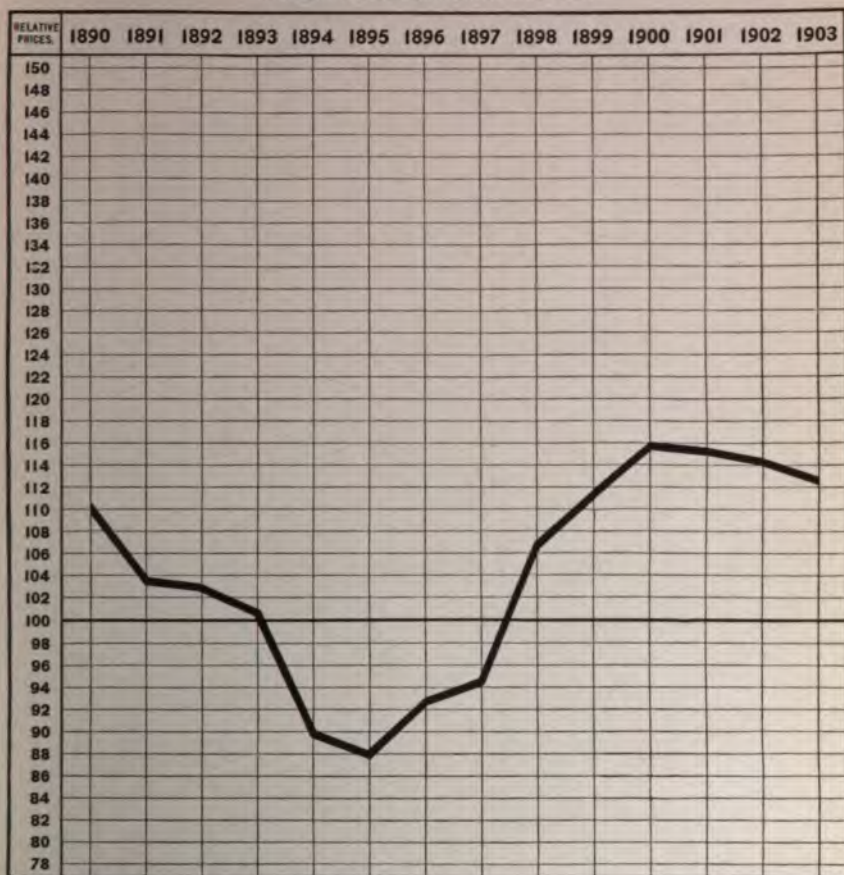
[AVERAGE PRICE FOR 1890 TO 1899 = 100.]





RELATIVE PRICES OF DRUGS AND CHEMICALS, 1890 TO 1903.

[AVERAGE PRICE FOR 1890 TO 1899 = 100.]



RELATIVE PRICES OF HOUSE FURNISHING GOODS, 1890 TO 1903.

[AVERAGE PRICE FOR 1890 TO 1899=100.]

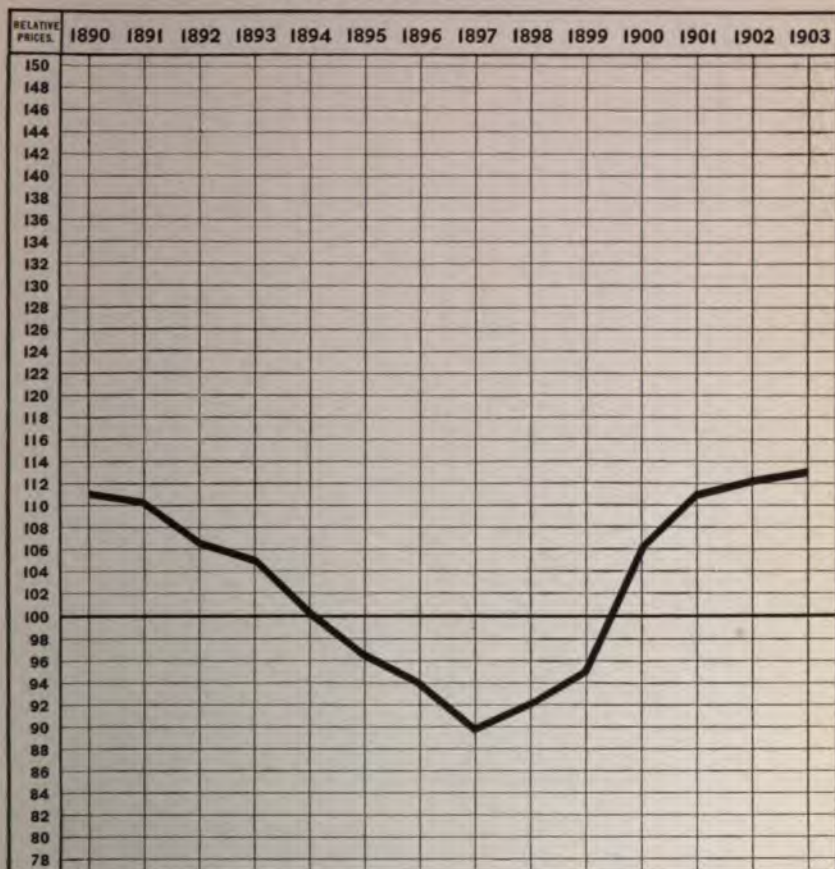


CHART 64



RELATIVE PRICES OF HOUSE FURNISHING GOODS, 1890 TO 1903.

[AVERAGE PRICE FOR 1890 TO 1899=100.]

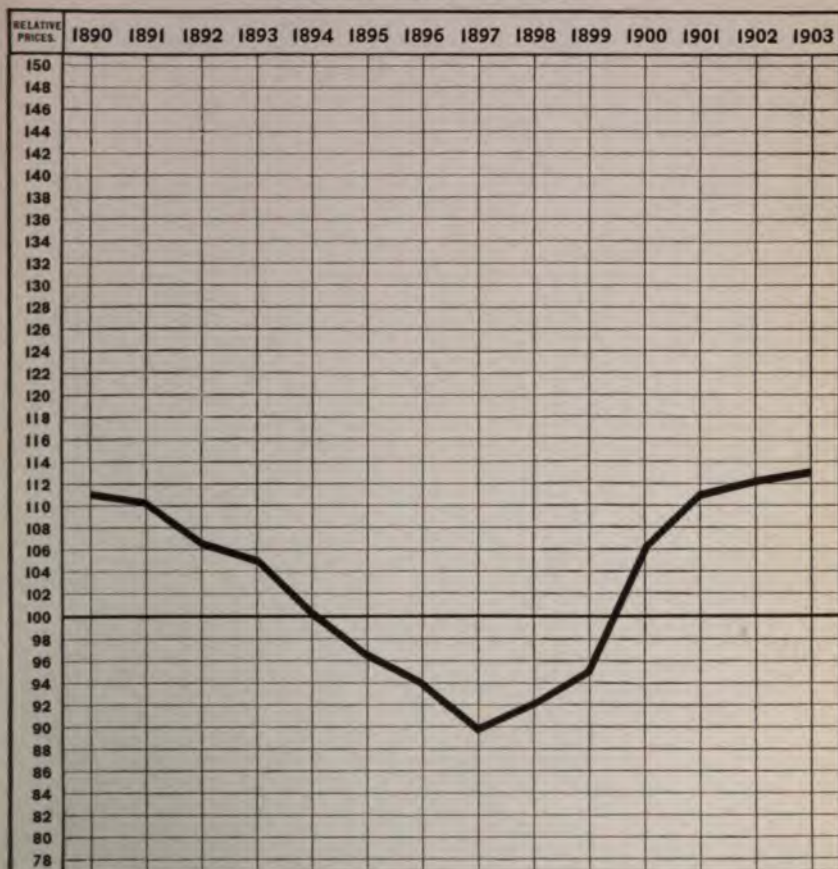


CHART 64

As previously indicated, this and similar tables should be read as follows: Taking for example the column showing the relative wholesale prices for all commodities, and bearing in mind that all of the figures represent percentages of the base price, which is uniformly 100, we see that the relative price of all commodities, or the general price level in 1890, was 112.9, or 12.9 higher than the base price, which, it will be remembered, is the average price for the ten-year period from 1890 to 1899; the general price level for all commodities declined slightly to 111.7 in 1891, being in this year 11.7 per cent higher than the base price; it declined to 106.1 in 1892, and was in this year 6.1 per cent above the base price; it declined slightly to 105.6 in 1893, being 5.6 per cent above the base price; it declined still further to 96.1 in 1894, being in this year 3.9 per cent below the base price, etc.

TABLE 2.—RELATIVE WHOLESALE PRICES OF RAW COMMODITIES, MANUFACTURED COMMODITIES, AND ALL COMMODITIES, 1890 TO 1903.

[Average price for 1890-1899=100.]

Year.	Raw commodities.	Manufactured commodities.	All commodities.
1890.....	115.0	112.3	112.9
1891.....	116.3	110.6	111.7
1892.....	107.9	105.6	106.1
1893.....	104.4	105.9	105.6
1894.....	93.2	96.8	96.1
1895.....	91.7	94.0	93.6
1896.....	84.0	91.9	90.4
1897.....	87.6	90.1	89.7
1898.....	94.0	93.3	93.4
1899.....	105.9	100.7	101.7
1900.....	111.9	110.2	110.5
1901.....	111.4	107.8	108.5
1902.....	122.4	110.6	112.9
1903.....	122.7	111.5	113.6

Many students of price statistics desire to distinguish between raw commodities and manufactured commodities, or those which have been prepared for consumption by the application of manufacturing processes and in which manufacturing labor forms a considerable part of the cost. To meet the wishes of this class of readers, the commodities included in this price series have been divided into the two classes, raw and manufactured, and simple averages made for each class. Of course, hard and fast definitions of these classes can not be made, but the commodities here designated as raw may be said to be such as are marketed in their natural state and such as have been subjected to only a preliminary manufacturing process, thus converting them into a marketable condition, but not to a suitable form for final consumption, while the commodities here designated as manufactured are such as have been subjected to more than a preliminary factory manipulation and in which the manufacturing labor cost constitutes an important element in the price. In the group designated as raw are included all farm products, beans, coffee, eggs, milk, rice, nutmegs,

pepper, tea, vegetables, raw silk, wool, coal, crude petroleum, copper ingots, pig lead, pig iron, bar silver, spelter, pig tin, brimstone, jute, and rubber—a total of 50 articles. All the other articles are classed as manufactured commodities.

In 1890 and 1891, when prices in general were high, the raw commodities were higher than the manufactured, and remained so until 1893, when prices of raw commodities declined and manufactured commodities were slightly above the prices of 1892. From 1894 to 1896 there was a marked decline in both groups, the raw being lower than the manufactured in each of these years. In 1897 raw advanced and manufactured declined. From 1898 to 1900 there was a decided advance in both groups each year, raw advancing to a higher point than manufactured. In 1901 there was a very slight decline in raw and a more marked decline in manufactured. In 1902 both raw and manufactured commodities made a decided advance. In 1903 raw commodities advanced to a point beyond the highest point previously reached in the 14 years under consideration, and manufactured commodities advanced to a level exceeded by that of one year only—1890.

For the 14 years included in this table, with the single exception of 1893, it will be seen that during the years of high prices raw commodities were higher than manufactured, and during the years of low prices, with the exception of 1898, raw were lower than manufactured.

The titles of the second series of charts are given in the following list, together with the necessary indication of the table which contains the data upon which they are based:

- Relative prices of live cattle and dressed beef, 1890 to 1903 (Table 3).
- Relative prices of live cattle and green hides, 1890 to 1903 (Table 3).
- Relative prices of live hogs and bacon, 1890 to 1903 (Table 3).
- Relative prices of live hogs and cured ham, 1890 to 1903 (Table 3).
- Relative prices of live hogs and mess pork, 1890 to 1903 (Table 3).
- Relative prices of live sheep and mutton, 1890 to 1903 (Table 3).
- Relative prices of live sheep and wool, 1890 to 1903 (Table 3).
- Relative prices of corn and corn meal, 1890 to 1903 (Table 3).
- Relative prices of wheat and wheat flour, 1890 to 1903 (Table 3).
- Relative prices of wheat flour and loaf bread, 1890 to 1903 (Table 3).
- Relative prices of 96° centrifugal (raw) sugar and granulated sugar, 1890 to 1903 (Table 3).
- Relative prices of raw cotton and calico, 1890 to 1903 (Table 3).
- Relative prices of raw cotton and print cloths, 1890 to 1903 (Table 3).
- Relative prices of raw cotton and cotton sheetings, 1890 to 1903 (Table 3).
- Relative prices of raw cotton and cotton shirtings, 1890 to 1903 (Table 3).
- Relative prices of wool and woolen suitings, 1890 to 1903 (Table 3).
- Relative prices of wool and woolen underwear, 1890 to 1903 (Table 3).
- Relative prices of wool and woolen dress goods, 1890 to 1903 (Table 3).
- Relative prices of wool and worsted yarns, 1890 to 1903 (Table 3).
- Relative prices of green hides and leather, 1890 to 1903 (Table 3).
- Relative prices of leather and boots and shoes, 1890 to 1903 (Table 3).
- Relative prices of crude petroleum and refined petroleum for export, 1890 to 1903 (Table 3).
- Relative prices of crude petroleum and refined 150° water white petroleum, 1890 to 1903 (Table 3).

3 of the above charts are based on the figures given in the following table. It is to be regretted that lack of space prevents their reproduction in this Bulletin.

3.—RELATIVE WHOLESALE PRICES OF CERTAIN GROUPS OF RELATED ARTICLES, 1890 TO 1903.

[Average price for 1890-1899 = 100.]

R.	Cattle and cattle products.			Hogs and hog products.				Sheep and sheep products.		
	Cattle.	Beef, fresh.	Hides, green.	Hogs.	Bacon.	Hams, smoked.	Mess pork.	Sheep.	Mutton.	Wool.
...	89.5	89.2	99.6	89.2	89.3	101.1	104.4	119.3	123.7	132.1
...	109.2	106.2	101.5	99.2	103.7	99.8	97.2	117.8	114.9	125.8
...	95.4	98.8	92.8	115.7	116.6	109.3	99.1	125.2	121.2	113.2
...	103.0	105.4	79.9	148.6	154.7	126.9	157.6	103.8	106.5	101.6
...	96.3	97.0	68.4	112.2	111.8	108.6	121.4	73.6	80.2	79.1
...	103.7	102.7	109.7	96.6	96.8	96.2	101.7	78.4	82.2	70.1
...	88.3	90.5	86.6	78.3	73.1	95.8	76.8	78.7	82.9	70.6
...	99.5	99.7	106.3	82.8	79.9	90.9	76.6	94.2	96.6	88.7
...	102.2	101.3	122.8	85.6	89.4	82.0	84.8	104.9	98.0	108.3
...	113.2	108.3	131.8	91.8	85.8	93.8	80.3	104.3	94.3	110.8
...	111.3	104.3	127.4	115.5	111.5	104.2	107.5	112.0	96.4	117.7
...	116.6	102.1	132.0	134.5	132.3	109.2	134.2	92.0	89.5	96.6
...	139.5	125.9	142.8	155.2	159.3	123.1	154.2	103.2	97.9	100.8
...	105.8	101.7	124.8	137.2	142.6	129.2	143.1	98.4	98.7	110.3

R.	Corn and corn meal.		Wheat, flour, and bread.			Sugar.		Cotton and cotton goods.				
	Corn.	Meal.	Wheat.	Wheat flour.	Loaf bread.	96°centrifugal.	Granulated.	Cotton, upland mid-dling.	Calico, Co-checo prints.	Print cloths.	Sheetings.	Shirtings.
...	103.8	100.8	118.9	120.9	100.8	141.1	130.5	142.9	117.5	117.7	117.6	112.9
...	151.0	142.0	128.1	125.6	100.8	101.1	99.7	110.8	104.0	103.5	112.3	110.2
...	118.3	114.0	104.9	104.2	100.8	85.7	92.1	99.0	117.5	119.3	103.8	107.4
...	104.2	105.8	90.1	89.3	100.8	95.1	102.3	107.2	113.0	114.6	107.7	110.2
...	113.7	105.6	74.4	77.6	100.8	83.5	87.0	90.2	99.5	96.8	95.9	99.9
...	104.0	103.3	79.9	84.4	98.7	84.1	87.9	94.0	94.9	100.9	94.6	97.6
...	67.8	77.4	85.4	91.2	94.4	93.7	95.9	102.0	94.9	90.9	97.4	97.9
...	66.9	76.5	105.8	110.1	100.8	92.1	95.1	92.2	90.4	87.6	91.8	92.0
...	82.6	83.7	117.8	109.0	100.8	109.5	105.2	76.9	81.4	72.6	86.7	83.8
...	87.6	91.2	94.7	87.9	100.8	114.3	104.2	84.7	87.3	96.3	92.2	87.8
...	100.2	97.0	93.7	88.3	100.8	118.2	112.8	123.8	94.9	108.6	105.9	100.4
...	130.6	115.5	95.7	87.4	100.8	104.4	106.8	111.1	90.4	99.3	101.8	98.9
...	156.9	148.2	98.7	89.7	100.8	91.5	94.2	115.1	90.4	108.9	101.4	98.8
...	121.1	124.7	105.1	97.1	100.8	96.1	98.2	144.7	91.1	113.3	110.6	103.2

R.	Wool and woolen goods.				Hides, leather, and boots and shoes.			Petroleum.		
	Wool.	Suitings.	Underwear (all wool).	Women's dress goods (all wool).	Worsted yarns.	Hides, green.	Leather.	Boots and shoes.	Crude.	Refined.
...	132.1	113.1	106.2	117.6	122.3	99.6	100.6	104.8	95.4	112.9
...	125.8	113.1	110.0	123.0	128.4	101.5	100.9	103.5	73.6	105.5
...	113.2	113.4	110.0	124.1	117.2	92.8	97.0	102.7	61.1	93.8
...	101.6	112.7	110.0	114.7	109.5	79.9	96.9	100.9	70.3	80.4
...	79.1	98.3	92.7	90.6	91.3	68.4	91.5	99.4	92.2	79.4
...	70.1	89.2	92.7	82.7	74.0	109.7	108.0	98.7	149.2	109.6
...	70.6	87.8	92.7	74.1	72.9	86.6	95.2	99.6	129.5	108.2
...	88.7	88.7	92.7	82.2	82.5	106.3	96.1	97.2	86.5	92.0
...	108.3	103.4	92.7	88.5	100.5	122.8	104.4	96.3	100.2	95.8
...	110.8	106.1	100.4	102.7	106.7	131.8	109.3	96.8	142.1	121.9
...	117.7	115.8	100.4	118.7	118.4	127.4	113.2	99.4	148.5	131.6
...	96.6	104.9	100.4	107.9	102.2	132.0	110.8	99.2	132.9	115.4
...	100.8	105.8	100.4	109.8	111.7	142.8	112.7	96.9	135.9	113.1
...	110.3	109.0	100.4	114.4	118.0	124.8	112.0	100.2	174.5	132.5

The titles of the third series of charts are given in the following list, together with the usual indication of the table which contains the data upon which they are based:

Actual prices of live cattle and dressed beef, 1890 to 1903 (Table 4).

Actual prices of wheat and wheat flour, 1890 to 1903 (Table 4).

Actual prices of 96° centrifugal (raw) sugar and granulated sugar, 1890 to 1903 (Table 4).

Actual prices of raw cotton and cotton yarns, carded, white, mule spun, northern (cones 22-1), 1890 to 1903 (Table 4).

Actual prices of scoured Ohio fine fleeced wool and worsted yarns (2-40s Australian fine), 1890 to 1903 (Table 4).

Actual prices of crude petroleum and refined petroleum for export, 1890 to 1903 (Table 4).

Actual prices of crude petroleum and refined 150° water-white petroleum, 1890 to 1903 (Table 4).

Actual prices of foundry No. 2 pig iron and 8-penny wire nails, 1890 to 1903 (Table 4).

Actual prices of foundry No. 2 pig iron and steel rails, 1890 to 1903 (Table 4).

Actual prices of steel billets and galvanized barb wire, 1890 to 1903 (Table 4).

Actual prices of steel billets and 8-penny wire nails, 1890 to 1903 (Table 4).

Nine of the charts named above are reproduced herewith in connection with Table 4, which gives the figures on which they are based:

TABLE 4.—ACTUAL WHOLESALE PRICES OF CERTAIN GROUPS OF RELATED ARTICLES, 1890 TO 1903.

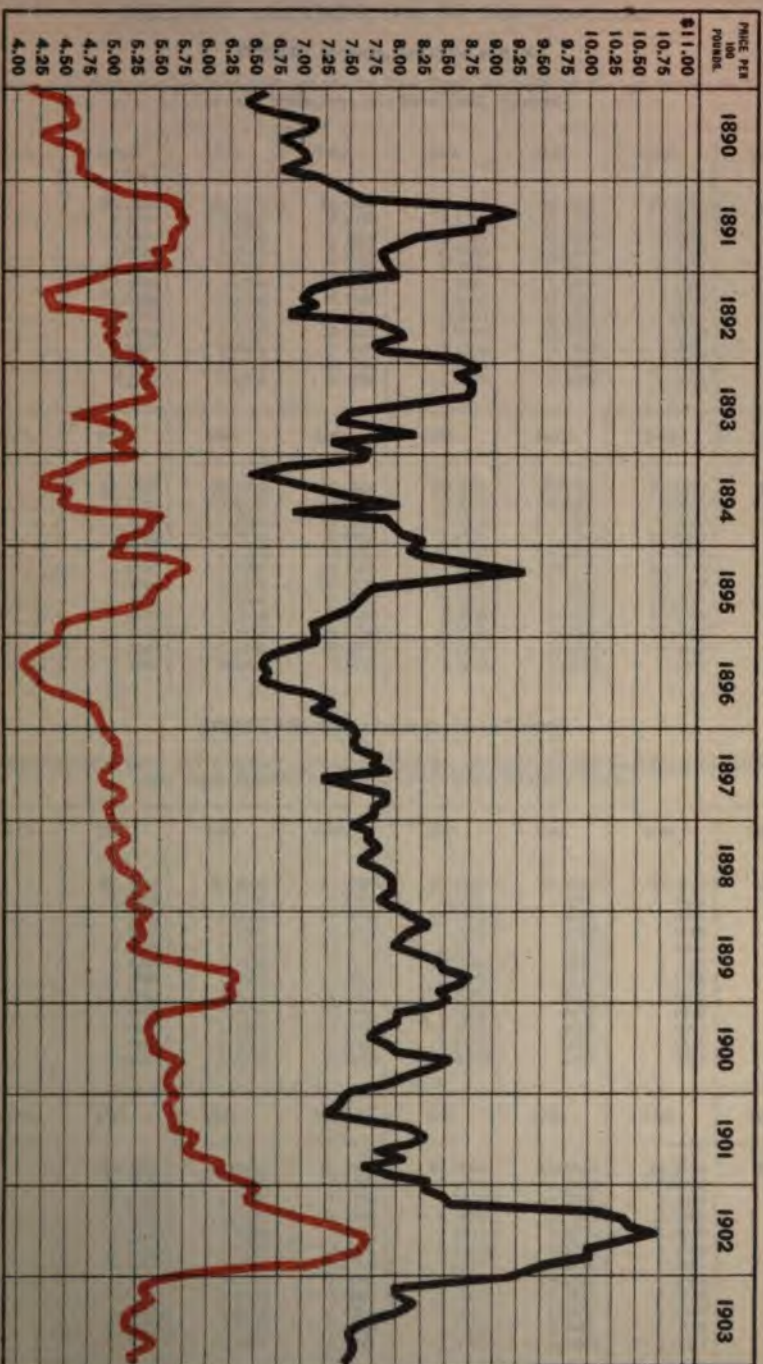
CATTLE: Steers, good to extra.

[Average monthly price per hundred pounds in Chicago: averages of the quotations on Tuesday of each week from the Daily Trade Bulletin.]

Month.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
Jan.....	\$4.0875	\$4.8563	\$5.0001	\$5.3250	\$5.2700	\$5.0725	\$4.4500
Feb.....	4.2782	5.0000	4.8032	5.4375	4.7094	4.9944	4.3188
Mar.....	4.5782	5.2425	4.6350	5.3157	4.5313	5.5282	4.1650
Apr.....	4.5425	5.6313	4.2813	5.3688	4.8032	5.8025	4.0876
May.....	4.6219	5.7344	4.3950	5.4325	4.2550	5.6032	4.1125
June.....	4.6157	5.6900	4.3844	5.3532	4.5282	5.5313	4.1000
July.....	4.2800	5.7688	5.1063	4.9907	4.4975	5.3925	4.2625
Aug.....	4.3188	5.6657	4.9250	4.5950	4.6063	5.4000	4.3388
Sept.....	4.6700	5.6400	5.0313	5.0219	5.5032	5.3344	4.6825
Oct.....	4.6938	5.6250	4.9313	5.1825	5.4000	4.9475	4.7388
Nov.....	4.6782	5.4532	5.0475	5.2000	5.3969	4.6001	4.8751
Dec.....	4.6475	5.5450	5.0469	4.9907	5.0876	4.4325	4.8650

Month.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
Jan.....	\$4.9001	\$4.9938	\$5.4125	\$6.0825	\$5.6975	\$6.5657	\$5.6094
Feb.....	4.9750	5.0500	5.3001	5.6813	5.5875	6.4313	5.3407
Mar.....	5.0725	5.1650	5.2813	5.4250	5.6407	6.4719	5.3650
Apr.....	5.0500	5.0657	5.3219	5.3782	5.6525	6.7060	5.4282
May.....	5.0625	4.9275	5.2150	5.3875	5.6469	7.0344	5.2541
June.....	4.9725	5.0313	5.2500	5.4438	5.8657	7.2907	5.1650
July.....	4.9032	5.0719	5.4625	5.4325	5.8600	7.6100	5.1313
Aug.....	4.9200	5.2450	5.9175	5.6138	5.8000	7.6969	5.2125
Sept.....	5.0969	5.2750	6.2532	5.7376	5.9219	7.6475	5.4075
Oct.....	5.1188	5.3813	6.3100	5.6250	6.1625	7.5844	5.4126
Nov.....	4.9600	5.1900	6.2407	5.5844	6.1594	7.1438	5.2250
Dec.....	4.9813	5.1782	6.2782	5.5938	6.2025	6.0150	5.2500

PRICES OF LIVE CATTLE AND DRESSED BEEF, 1890 TO 1903.



— = LIVE CATTLE. — = DRESSED BEEF.

TABLE 4.—ACTUAL WHOLESALE PRICES OF CERTAIN GROUPS OF RELATED ARTICLES, 1890 TO 1903—Continued.

COTTON YARNS: Carded, white, mule-spun, Northern, cones, 22 1.

[Price per pound on the first of each month.]

Month.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
Jan.	\$0.21	\$0.21	\$0.23	\$0.22	\$0.19	\$0.17	\$0.20	\$0.17	\$0.18	\$0.16	\$0.21	\$0.22	\$0.17	\$0.19
Feb.	a. 21	a. 22	a. 23	.22	.19	.17	.20	.17	.18	.16	.22	.22	.17	.19
Mar.	a. 21	a. 22	a. 23	.22	.19	.17	.19	.17	.18	.16	.22	.21	.17	.20
Apr.	a. 21	a. 22	a. 23	.21	.18	.17	.18	.17	.18	.16	.23	.21	.18	.20
May.	a. 21	a. 22	a. 23	.22	.18	.18	.18	.17	.18	.16	.23	.19	.18	.21
June.	a. 21	a. 22	a. 23	.21	.17	.18	.17	.17	.18	.16	.23	.18	.18	.21
July.	a. 22	a. 22	a. 24	.21	.17	.17	.18	.18	.18	.17	.23	.18	.17	.21
Aug.	a. 22	a. 22	a. 23	.21	.17	.18	.17	.18	.17	.17	.23	.18	.17	.21
Sept.	a. 21	a. 22	a. 23	.20	.17	.18	.17	.18	.17	.17	.23	.17	.18	.21
Oct.	a. 22	a. 23	a. 23	.20	.17	.19	.18	.18	.17	.18	.23	.17	.19	.21
Nov.	a. 22	a. 23	a. 22	.21	.17	.19	.17	.18	.17	.20	.23	.17	.19	.21
Dec.	a. 22	a. 23	a. 21	.20	.17	.19	.18	.18	.16	.20	.23	.17	.19	.21

WOOL: Ohio, fine fleece (X and XX grade), scoured.

[Price per pound in the Eastern markets (Baltimore, Boston, New York, and Philadelphia) on the first of each month.]

Month.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
Jan.	\$0.72-3	\$0.72-3	\$0.6413	\$0.6141	\$0.5000	\$0.3804	\$0.4130
Feb.	.7171	.72-3	.6304	.6413	.4891	.3696	.4130
Mar.	.7065	.7065	.6087	.6576	.4565	.3587	.4130
Apr.	.7065	.7065	.5978	.6576	.4565	.3587	.4130
May.	.7065	.6957	.5978	.5978	.4783	.3587	.3804
June.	.7174	.6739	.6087	.5326	.4565	.3478	.3696
July.	.7174	.6848	.6087	.5326	.4348	.3913	.3696
Aug.	.7174	.6848	.6087	.5217	.4348	.3913	.3696
Sept.	.7065	.6848	.6087	.5000	.4348	.3913	.3696
Oct.	.7174	.6522	.6087	.5000	.4022	.3913	.3913
Nov.	.72-3	.6413	.6087	.5000	.4022	.3913	.4130
Dec.	.7174	.6413	.6141	.5109	.3913	.3913	.4130

Month.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
Jan.	\$0.4130	\$0.6087	\$0.5761	\$0.7609	\$0.5652	\$0.5543	\$0.6393
Feb.	.4130	.6304	.5761	.7609	.5543	.5543	.6409
Mar.	.4239	.6304	.5761	.7500	.5435	.5543	.6393
Apr.	.4565	.6304	.5435	.7065	.5435	.5435	.6277
May.	.4674	.6087	.5652	.6848	.5435	.5543	.6064
June.	.4674	.6087	.5870	.6630	.5326	.5435	.6170
July.	.4674	.6087	.6196	.6196	.5435	.5652	.6721
Aug.	.5109	.6196	.6413	.6196	.5435	.5870	.6721
Sept.	.5326	.6196	.6630	.5978	.5435	.6087	.6809
Oct.	.5870	.6196	.6739	.5870	.5435	.6087	.6809
Nov.	.6087	.5978	.6957	.5761	.5435	.6087	.6809
Dec.	.5978	.5978	.7609	.5870	.5435	.6413	.6915

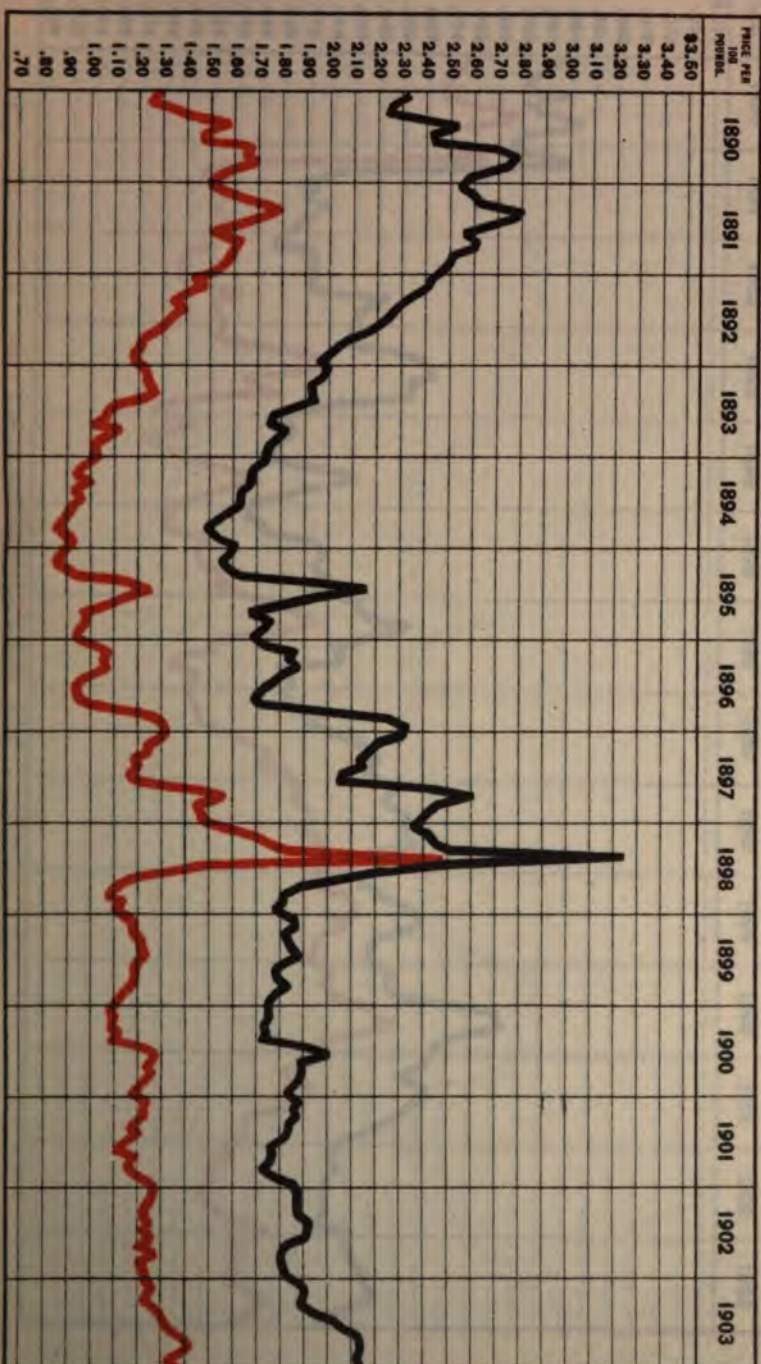
WORSTED YARNS: 2-40s, Australian fine.

[Price per pound on the first of each month.]

Month.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
Jan.	\$1.25	\$1.25	\$1.20	\$1.17	\$1.10	\$0.75	\$0.72	\$0.73	\$1.00	\$1.00	\$1.30	\$1.07	\$1.10	\$1.20
Feb.	.1.25	.1.25	.1.20	.1.15	.1.10	.75	.72	.75	1.02	.98	1.30	1.05	1.10	1.20
Mar.	.1.22	.1.25	.1.24	1.15	1.10	.75	.72	.74	1.02	.99	1.30	1.03	1.10	1.20
Apr.	.1.22	.1.25	.1.24	1.15	1.10	.75	.73	.74	.98	1.00	1.30	1.00	1.10	1.20
May.	.1.22	.1.25	.1.24	1.15	1.00	.75	.73	.74	.95	1.00	1.25	1.00	1.10	1.17
June.	.1.22	.1.25	.1.24	1.12	1.00	.75	.73	.76	1.02	1.02	1.22	1.00	1.10	1.17
July.	.1.22	.1.22	.1.24	1.12	.85	.75	.73	.76	1.05	1.05	1.20	1.02	1.12	1.17
Aug.	.1.22	.1.22	.1.24	1.12	.80	.74	.73	.80	1.09	1.10	1.20	1.03	1.12	1.17
Sept.	.1.22	.1.22	.1.20	1.12	.80	.74	.73	.95	1.09	1.15	1.15	1.05	1.12	1.17
Oct.	.1.22	.1.22	.1.19	1.12	.80	.74	.72	1.10	1.05	1.20	1.10	1.06	1.15	1.15
Nov.	.1.22	.1.22	.1.19	1.12	.75	.72	.72	1.10	1.05	1.30	1.07	1.07	1.17	1.15
Dec.	.1.22	.1.20	.1.19	1.12	.75	.72	.72	1.05	1.05	1.30	1.07	1.10	1.17	1.15

a Records destroyed. Price estimated by person who furnished data for later years.

PRICES OF WHEAT AND WHEAT FLOUR, 1890 TO 1903.



— = WHEAT. — = WHEAT FLOUR.

TABLE 4.—ACTUAL WHOLESALE PRICES OF CERTAIN GROUPS OF RELATED ARTICLES, 1890 TO 1903—Continued.

COTTON YARNS: Carded, white, mule-spun, Northern, comes, 22-1.

[Price per pound on the first of each month.]

Month.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
Jan.	\$0.21	\$0.22	\$0.23	\$0.22	\$0.19	\$0.17	\$0.20	\$0.17	\$0.18	\$0.16	\$0.21	\$0.22	\$0.17	\$0.19
Feb.	a .21	a .22	a .23	.22	.19	.17	.20	.17	.18	.16	.22	.22	.17	.19
Mar.	a .21	a .22	a .23	.22	.19	.17	.19	.17	.18	.16	.22	.21	.17	.20
Apr.	a .22	a .22	a .23	.21	.18	.17	.18	.17	.18	.16	.23	.21	.18	.20
May.	a .22	a .22	a .23	.22	.18	.18	.18	.17	.18	.16	.23	.19	.18	.21
June.	a .22	a .22	a .23	.21	.17	.18	.17	.17	.18	.16	.23	.18	.18	.22
July.	a .22	a .22	a .24	.21	.17	.17	.17	.18	.18	.17	.23	.18	.17	.23
Aug.	a .22	a .22	a .23	.21	.17	.18	.17	.18	.17	.17	.23	.18	.17	.23
Sept.	a .22	a .22	a .23	.20	.17	.18	.17	.18	.17	.17	.23	.17	.18	.22
Oct.	a .22	a .23	a .23	.20	.17	.19	.18	.18	.17	.18	.23	.17	.19	.21
Nov.	a .22	a .23	a .22	.21	.17	.19	.17	.18	.17	.20	.23	.17	.19	.21
Dec.	a .22	a .23	a .21	.20	.17	.19	.18	.18	.16	.20	.22	.17	.19	.23

WOOL: Ohio, fine fleece (X and XX grade), scoured.

[Price per pound in the Eastern markets (Baltimore, Boston, New York, and Philadelphia) on the first of each month.]

Month.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
Jan.	\$0.723	\$0.723	\$0.6413	\$0.6141	\$0.5000	\$0.3804	\$0.4130
Feb.	.7174	.723	.6304	.6413	.4891	.3696	.4130
Mar.	.7065	.7065	.6087	.6576	.4565	.3587	.4130
Apr.	.7065	.7065	.5978	.6576	.4565	.3587	.4130
May.	.7065	.6957	.5978	.5978	.4788	.3587	.3804
June.	.7174	.6739	.6087	.5326	.4565	.3478	.3696
July.	.7174	.6848	.6087	.5326	.4348	.3913	.3696
Aug.	.7174	.6848	.6087	.5217	.4348	.3913	.3696
Sept.	.7065	.6848	.6087	.5000	.4348	.3913	.3696
Oct.	.7174	.6522	.6087	.5000	.4022	.3913	.3913
Nov.	.723	.6413	.6087	.5000	.4022	.3913	.4130
Dec.	.7174	.6413	.6141	.5109	.3913	.3913	.4130

Month.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
Jan.	\$0.4130	\$0.6087	\$0.5761	\$0.7609	\$0.5652	\$0.5543	\$0.6383
Feb.	.4130	.6304	.5761	.7609	.5543	.5543	.6489
Mar.	.4239	.6304	.5761	.7500	.5435	.5543	.6383
Apr.	.4565	.6304	.5435	.7065	.5435	.5435	.6277
May.	.4674	.6087	.5652	.6848	.5435	.5543	.6064
June.	.4674	.6087	.5870	.6330	.6326	.5435	.6170
July.	.4674	.6087	.6196	.6196	.5435	.5652	.6721
Aug.	.5109	.6196	.6413	.6196	.5435	.5870	.6721
Sept.	.5326	.6196	.6630	.5978	.5435	.6087	.6809
Oct.	.5870	.6196	.6739	.5870	.5435	.6087	.6809
Nov.	.6087	.5978	.6357	.5761	.5435	.6087	.6809
Dec.	.5978	.5978	.7609	.5870	.5435	.6413	.6915

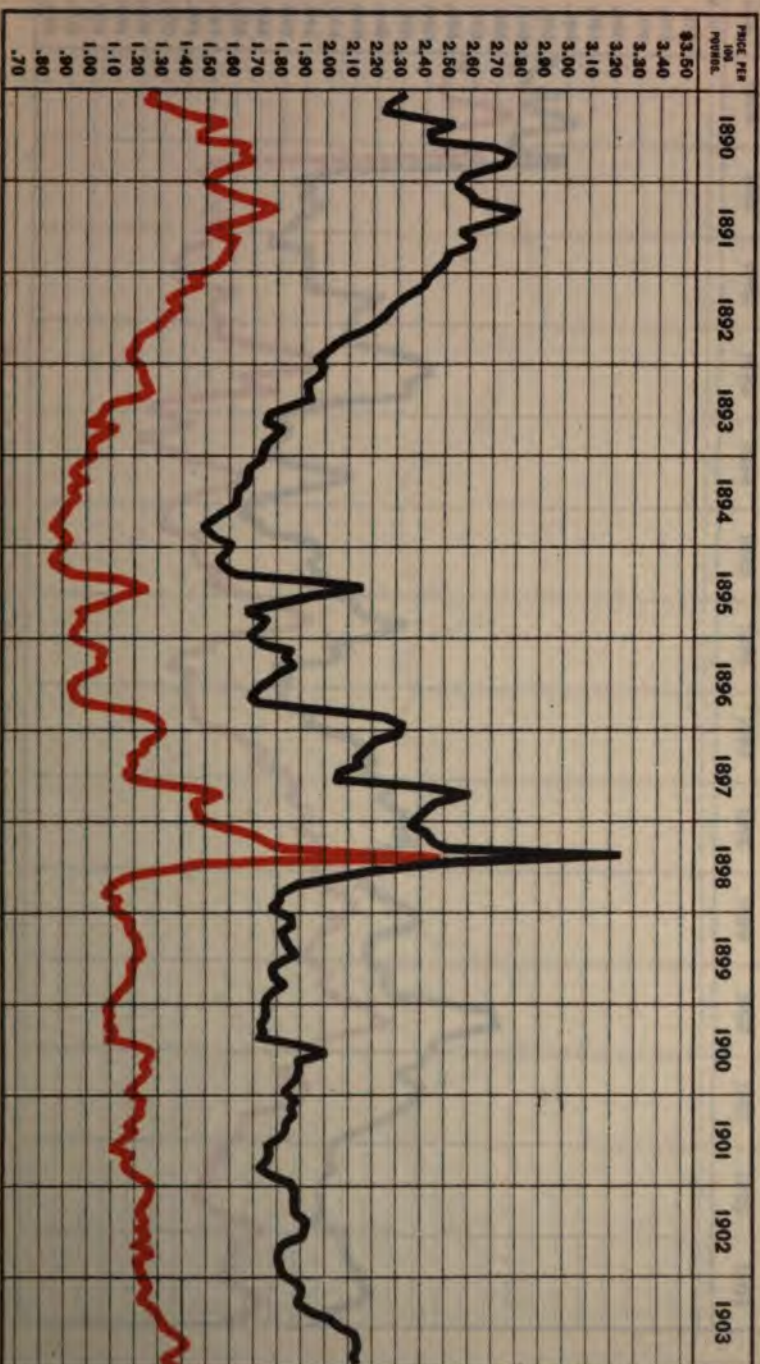
WORSTED YARNS: 2-40s, Australian fine.

[Price per pound on the first of each month.]

Month.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
Jan.	\$1.25	\$1.25	\$1.20	\$1.17	\$1.10	\$0.75	\$0.72	\$0.73	\$1.00	\$1.00	\$1.30	\$1.07	\$1.10	\$1.20
Feb.	.1.25	.1.25	.1.20	.1.15	.1.10	.75	.72	.75	1.02	.98	1.30	1.05	1.10	1.20
Mar.	.1.22	.1.25	.1.24	.1.15	1.10	.75	.72	.74	1.02	.99	1.30	1.03	1.10	1.20
Apr.	.1.22	.1.25	.1.24	.1.15	1.10	.75	.73	.74	.98	1.00	1.30	1.00	1.10	1.20
May.	.1.22	.1.25	.1.24	1.16	1.00	.75	.73	.74	.95	1.00	1.25	1.00	1.10	1.17
June.	.1.22	.1.25	.1.24	1.12	1.00	.75	.73	.76	1.02	1.02	1.22	1.00	1.10	1.17
July.	.1.22	.1.22	.1.24	1.12	.85	.75	.73	.76	1.05	1.05	1.20	1.02	1.12	1.17
Aug.	.1.22	.1.22	.1.24	1.12	.80	.74	.73	.80	1.09	1.10	1.20	1.03	1.12	1.17
Sept.	.1.22	.1.22	.1.20	1.12	.80	.74	.73	.95	1.09	1.15	1.15	1.05	1.12	1.17
Oct.	.1.22	.1.22	.1.19	1.12	.80	.74	.72	1.10	1.05	1.20	1.10	1.06	1.15	1.15
Nov.	.1.22	.1.22	.1.19	1.12	.75	.72	.72	1.10	1.05	1.30	1.07	1.07	1.17	1.15
Dec.	.1.22	.1.20	.1.19	1.12	.75	.72	.72	1.05	1.05	1.30	1.07	1.10	1.17	1.15

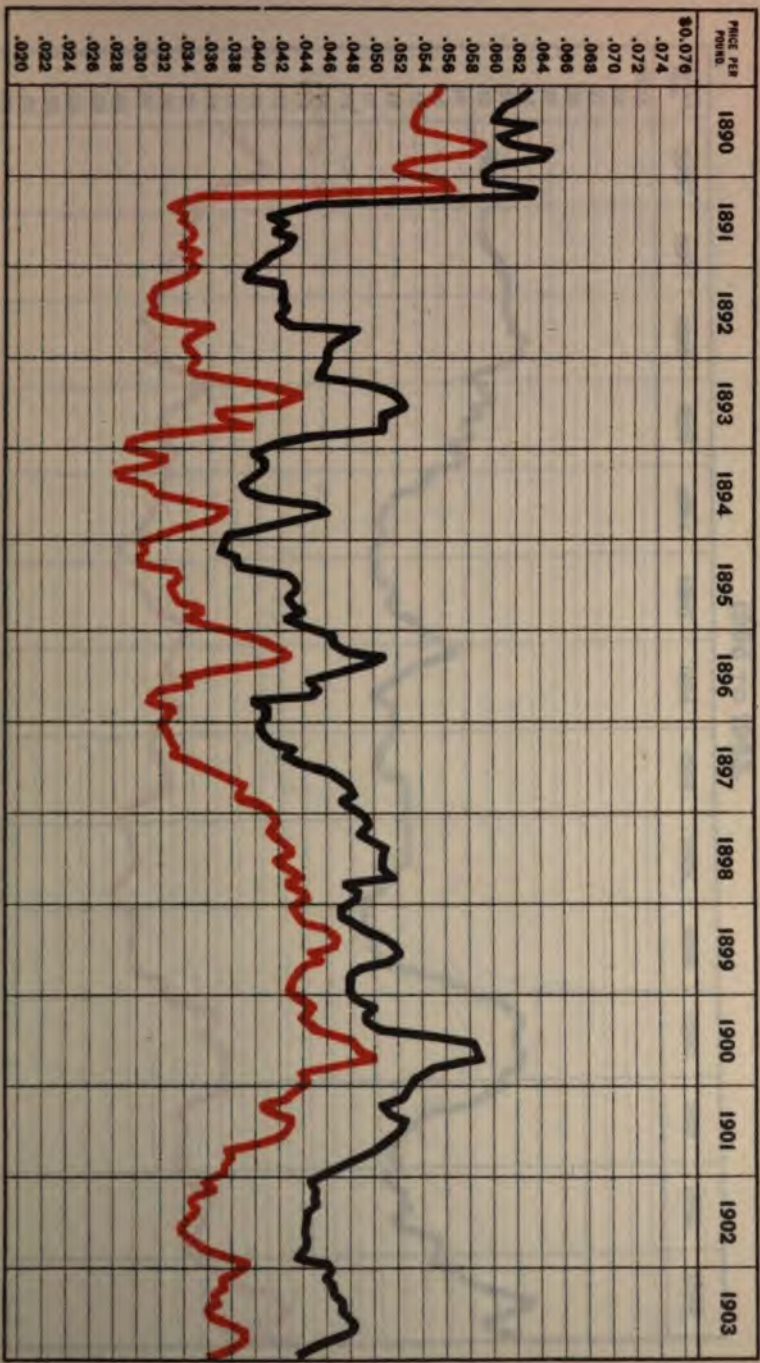
a Records destroyed. Price estimated by person who furnished data for later years.

PRICES OF WHEAT AND WHEAT FLOUR, 1890 TO 1903.



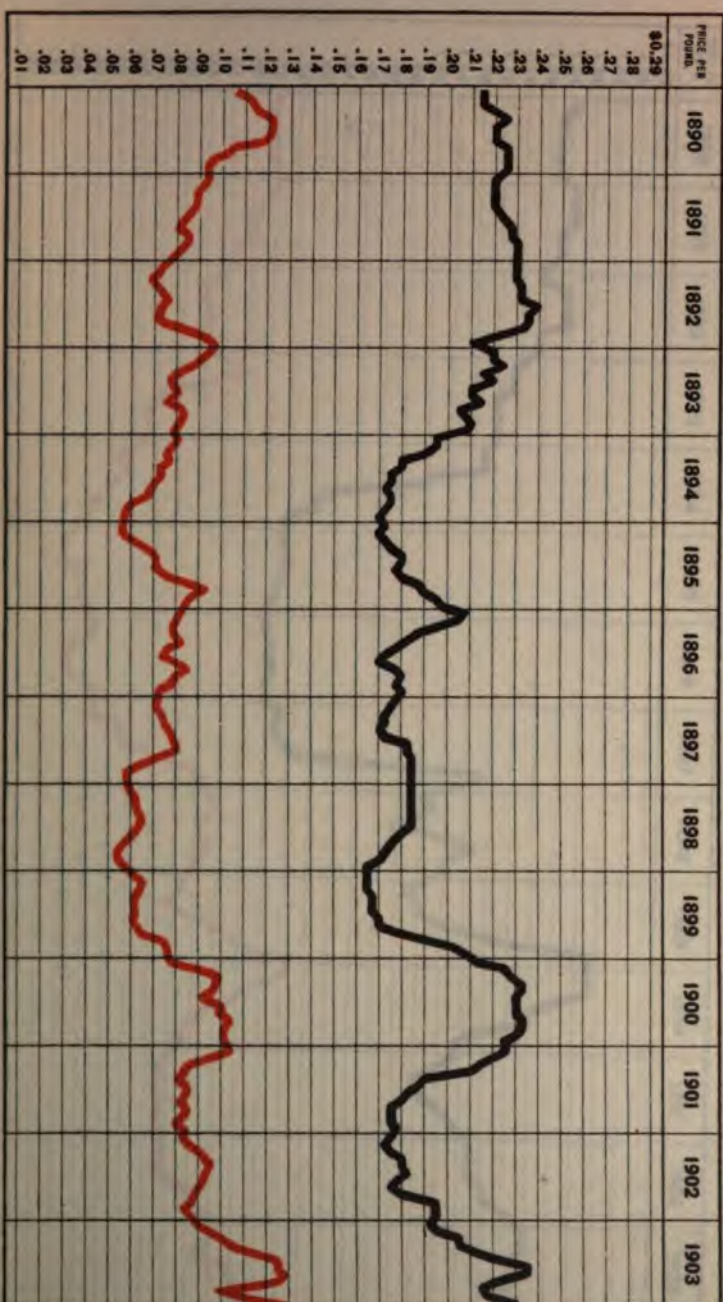
— = WHEAT. — = WHEAT FLOUR.

PRICES OF 96° CENTRIFUGAL (RAW) SUGAR AND GRANULATED SUGAR, 1890 TO 1903.



— = 96° CENTRIFUGAL (RAW) SUGAR. — = GRANULATED SUGAR.

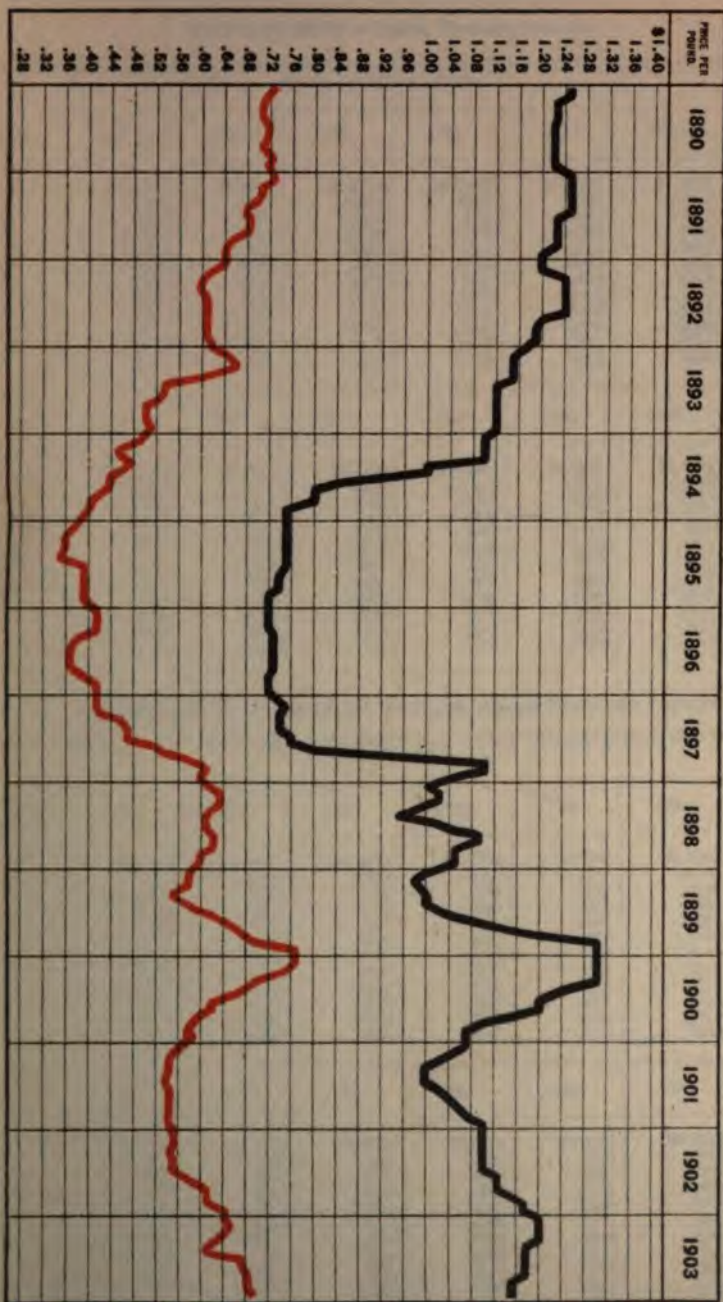
**PRICES OF RAW COTTON AND COTTON YARNS (CARDED, WHITE, MULE-SPUN, NORTHERN, CONES, 22/1)
1890 TO 1903.**



— = RAW COTTON. — = COTTON YARNS.



**PRICES OF SCOURED OHIO FINE FLEECE WOOL AND WORSTED YARNS (2-40s AUSTRALIAN FINE)
1890 TO 1903.**



— = SCOURED OHIO FINE FLEECE WOOL. — = WORSTED YARNS.

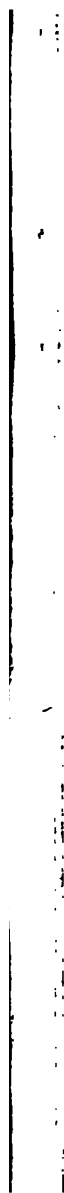


TABLE 4.—ACTUAL WHOLESALE PRICES OF CERTAIN GROUPS OF RELATED ARTICLES, 1890 TO 1903—Continued.**PETROLEUM: Crude, Pennsylvania.**

For monthly price per gallon at wells; quotations furnished by Miss Belle Hill, of the United States Geological Survey.]

h.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
....	\$0.0252	\$0.0177	\$0.0149	\$0.0127	\$0.0190	\$0.0236	\$0.0340
....	.0250	.0187	.0143	.0137	.0192	.0249	.0325
....	.0214	.0177	.0136	.0155	.0195	.0261	.0306
....	.0197	.0170	.0138	.0164	.0201	.0426	.0292
....	.0212	.0166	.0137	.0140	.0205	.0415	.0275
....	.0213	.0162	.0129	.0143	.0213	.0366	.0273
....	.0212	.0158	.0125	.0137	.0198	.0349	.0258
....	.0213	.0152	.0131	.0140	.0193	.0300	.0250
....	.0196	.0139	.0129	.0154	.0198	.0291	.0267
....	.0191	.0144	.0122	.0163	.0198	.0296	.0274
....	.0172	.0140	.0124	.0176	.0198	.0363	.0276
....	.0160	.0141	.0127	.0186	.0218	.0338	.0238
h.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
....	\$0.0210	\$0.0155	\$0.0279	\$0.0397	\$0.0285	\$0.0274	\$0.0363
....	.0215	.0161	.0274	.0400	.0298	.0274	.0357
....	.0219	.0187	.0269	.0400	.0307	.0274	.0357
....	.0204	.0176	.0269	.0369	.0287	.0280	.0360
....	.0207	.0186	.0269	.0332	.0256	.0286	.0361
....	.0205	.0207	.0270	.0299	.0250	.0287	.0357
....	.0143	.0222	.0292	.0299	.0270	.0290	.0363
....	.0169	.0233	.0304	.0299	.0298	.0290	.0371
....	.0166	.0242	.0344	.0293	.0299	.0290	.0374
....	.0160	.0269	.0359	.0263	.0310	.0305	.0401
....	.0155	.0277	.0375	.0254	.0310	.0329	.0426
....	.0156	.0280	.0393	.0259	.0288	.0356	.0449

PETROLEUM: Refined, in barrels, cargo lots, for export.

Per gallon, New York loading, on the first of each month; quotations from the Oil, Paint, and Drug Reporter.]

h.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
....	\$0.0750	\$0.0740	\$0.0645	\$0.0540	\$0.0515	\$0.0580	\$0.0800
....	.0750	.0745	.0645	.0530	.0515	.0590	.0760
....	.0740	.0750	.0640	.0530	.0515	.0630	.0710
....	.0720	.0690	.0610	.0545	.0515	.0735	.0720
....	.0720	.0720	.0610	.0510	.0515	.0825	.0695
....	.0720	.0690	.0600	.0515	.0515	.0800	.0665
....	.0710	.0690	.0600	.0515	.0515	.0780	.0690
....	.0720	.0670	.0600	.0515	.0515	.0710	.0660
....	.0735	.0630	.0610	.0515	.0515	.0710	.0680
....	.0740	.0625	.0610	.0515	.0515	.0710	.0690
....	.0760	.0620	.0590	.0515	.0515	.0710	.0700
....	.0730	.0645	.0560	.0515	.0515	.0750	.0650
h.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
....	\$0.0620	\$0.0540	\$0.0750	\$0.0990	\$0.0760	\$0.0720	\$0.0830
....	.0625	.0540	.0740	.0990	.0760	.0720	.0820
....	.0630	.0590	.0735	.0990	.0795	.0720	.0820
....	.0655	.0575	.0725	.0960	.0775	.0720	.0835
....	.0605	.0600	.0695	.0905	.0725	.0740	.0835
....	.0615	.0615	.0720	.0800	.0690	.0740	.0855
....	.0605	.0625	.0735	.0785	.0690	.0740	.0855
....	.0675	.0640	.0780	.0805	.0750	.0720	.0855
....	.0675	.0650	.0825	.0805	.0750	.0720	.0855
....	.0680	.0688	.0895	.0745	.0765	.0720	.0880
....	.0640	.0740	.0925	.0745	.0765	.0745	.0930
....	.0640	.0730	.0965	.0725	.0765	.0805	.0950

TABLE 4.—ACTUAL WHOLESALE PRICES OF CERTAIN GROUPS OF RELATED ARTICLES, 1890 TO 1903—Continued.

STEEL RAILS.

Average monthly price per 100 pounds at mills in Pennsylvania; quotations from the Bulletin of the American Iron and Steel Association.]

Month.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
.....	\$1.5737	\$1.2946	\$1.3393	\$1.2946	\$1.0714	\$0.9821	\$1.2500
.....	1.5625	1.3393	1.3393	1.2946	1.0714	.9821	1.2500
.....	1.5179	1.3393	1.3393	1.2946	1.0714	.9821	1.2500
.....	1.4956	1.3393	1.3393	1.2946	1.0714	.9821	1.2500
.....	1.3994	1.3393	1.3393	1.2946	1.0714	.9821	1.2500
.....	1.4063	1.3393	1.3393	1.2946	1.0714	.9821	1.2500
.....	1.4063	1.3393	1.3393	1.2946	1.0714	1.0714	1.2500
.....	1.3951	1.3393	1.3393	1.2946	1.0714	1.0714	1.2500
.....	1.3616	1.3393	1.3393	1.2946	1.0714	1.2500	1.2500
.....	1.3393	1.3393	1.3393	1.2277	1.0714	1.2500	1.2500
.....	1.2946	1.3393	1.3393	1.1161	1.0714	1.2500	1.2500
.....	1.2723	1.3393	1.3393	1.0714	1.0714	1.2500	1.2500
Month.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
.....	\$1.1161	\$0.8036	\$0.8259	\$1.5625	\$1.1607	\$1.2500	\$1.2500
.....	.8929	.8036	.9040	1.5288	1.1607	1.2500	1.2500
.....	.8036	.8036	1.1071	1.5625	1.1607	1.2500	1.2500
.....	.8036	.8036	1.1496	1.5625	1.1607	1.2500	1.2500
.....	.8036	.8036	1.1250	1.5625	1.2500	1.2500	1.2500
.....	.8036	.7813	1.2165	1.5625	1.2500	1.2500	1.2500
.....	.8036	.7589	1.2612	1.5625	1.2500	1.2500	1.2500
.....	.8036	.7813	1.3839	1.5625	1.2500	1.2000	1.2500
.....	.8036	.7813	1.4509	1.3504	1.2500	1.2500	1.2500
.....	.8036	.7813	1.5179	1.1607	1.2500	1.2500	1.2500
.....	.8036	.7589	1.5625	1.1607	1.2500	1.2500	1.2500
.....	.8036	.7813	1.5625	1.1607	1.2500	1.2500	1.2500

STEEL BILLETS.

Average monthly price per 100 pounds at mills at Pittsburg; quotations from the Bulletin of the American Iron and Steel Association.]

Month.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
.....	\$1.6504	\$1.1451	\$1.1161	\$0.9710	\$0.7188	\$0.6003	\$0.7411
.....	1.5875	1.1549	1.0714	.9625	.7116	.6701	.7897
.....	1.4344	1.1746	1.0415	.9973	.6902	.6670	.7674
.....	1.2723	1.1317	1.0210	1.0143	.7004	.6884	.8839
.....	1.2415	1.1438	1.0076	.9683	.7924	.7251	.8728
.....	1.3608	1.1357	1.0183	.9763	.8304	.8415	.8670
.....	1.3772	1.1518	1.0397	.9540	.7924	.9402	.8705
.....	1.3563	1.1272	1.0750	.9205	.7924	.9814	.8580
.....	1.3400	1.1161	1.0821	.8567	.7723	1.0871	.8665
.....	1.2862	1.1094	1.0513	.8009	.7143	.9906	.8608
.....	1.2335	1.0853	1.1085	.7728	.6915	.8884	.8879
.....	1.1763	1.0938	1.0268	.7531	.6746	.7589	.8036
Month.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
.....	\$0.7098	\$0.6696	\$0.7616	\$1.5402	\$0.8817	\$1.2321	\$1.3214
.....	.6920	.6750	.8124	1.4777	.9067	1.3112	1.3393
.....	.6973	.6862	1.0826	1.4732	1.0210	1.3951	1.3670
.....	.6540	.6830	1.1272	1.4286	1.0714	1.4063	1.3182
.....	.6232	.6670	1.2304	1.2902	1.0714	1.4375	1.3504
.....	.6304	.6585	1.1228	1.2165	1.0879	1.4151	1.2888
.....	.6250	.6585	1.5089	.9375	1.0714	1.4174	1.2232
.....	.6379	.6973	1.6237	.8125	1.0804	1.4174	1.2054
.....	.6920	.7143	1.8527	.7616	1.1103	1.3839	1.2054
.....	.7388	.7054	1.8527	.7500	1.1920	1.3571	1.2054
.....	.7085	.6750	1.7411	.8567	1.2054	1.2723	1.0714
.....	.6696	.7098	1.6237	.8817	1.2277	1.3036	1.0268

TABLE 4.—ACTUAL WHOLESALE PRICES OF CERTAIN GROUPS OF RELATED ARTICLES, 1890 TO 1903—Continued.

PETROLEUM: Refined, 150° fire test, water white, in barrels, packages included (jobbing lots).

[Price per gallon in New York on the first of each month; quotations from the Oil, Paint, and Drug Reporter.]

Month.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
Jan.	\$0.19	\$0.09	\$0.08	\$0.07	\$0.07	\$0.07	\$0.10	\$0.09	\$0.09	\$0.09	\$0.12	\$0.11	\$0.11	\$0.13
Feb.	.10	.09	.08	.07	.07	.07	.09	.09	.09	.09	.12	.11	.11	.13
Mar.	.10	.09	.08	.07	.07	.08	.11	.09	.09	.09	.12	.11	.11	.13
Apr.	.10	.08	.08	.07	.07	.09	.11	.09	.09	.09	.12	.11	.11	.13
May	.10	.08	.08	.07	.07	.10	.10	.09	.09	.09	.12	.11	.11	.13
June	.09	.08	.08	.07	.07	.10	.10	.09	.09	.09	.12	.10	.11	.13
July	.09	.08	.07	.07	.07	.10	.10	.09	.09	.09	.11	.10	.11	.13
Aug.	.09	.08	.07	.07	.07	.09	.10	.09	.09	.09	.11	.11	.11	.13
Sept.	.09	.08	.07	.07	.07	.09	.10	.09	.09	.09	.11	.11	.11	.13
Oct.	.09	.08	.07	.07	.07	.09	.10	.09	.09	.11	.11	.11	.11	.13
Nov.	.09	.08	.07	.07	.07	.09	.10	.09	.09	.12	.11	.11	.11	.15
Dec.	.09	.08	.07	.07	.07	.09	.10	.09	.09	.12	.11	.11	.12	.15

PIG IRON: Foundry No. 2.

[Price per 100 pounds, f. o. b. Pittsburg, on the first of each month; quotations from the Iron Age.]

Month.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
Jan.	\$0.8371	\$0.7087	\$0.6585	\$0.5903	\$0.5078	\$0.4520	\$0.5748
Feb.	.8394	.6752	.6585	.5748	.4855	.4408	.5748
Mar.	.8371	.6975	.6417	.5748	.4855	.4330	.5748
Apr.	.7921	.7087	.6350	.5748	.4743	.4475	.5413
May	.7310	.6611	.6306	.5748	.4721	.4520	.5413
June	.7645	.6808	.6083	.5681	.4855	.4713	.5301
July	.7366	.7031	.5971	.5636	.4855	.5479	.5301
Aug.	.7310	.6975	.5971	.5525	.4855	.5748	.5078
Sept.	.7310	.6864	.5971	.5413	.4855	.5748	.1855
Oct.	.7310	.6864	.5859	.5301	.4855	.6417	.1855
Nov.	.7193	.6752	.5859	.5246	.4855	.6306	.4632
Dec.	.7193	.6611	.5826	.5246	.4721	.5859	.4967

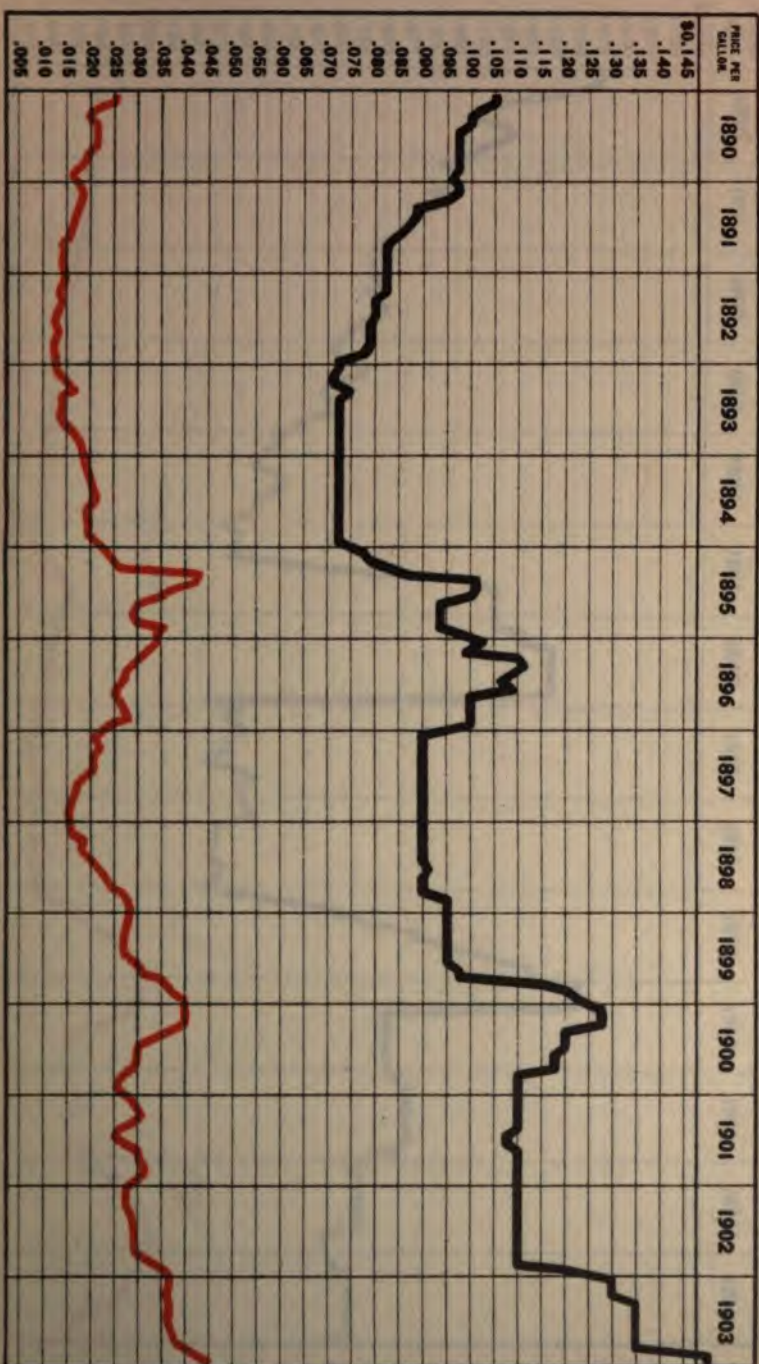
Month.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
Jan.	\$0.1855	\$0.4542	\$0.4632	\$1.0212	\$0.6117	\$0.7122	\$1.0603
Feb.	.1743	.4412	.4743	1.0264	.6306	.7422	1.0156
Mar.	.1632	.4412	.5837	.9989	.6585	.8017	1.0201
Apr.	.1520	.4161	.6752	1.0022	.6752	.8017	.9764
May	.1408	.4161	.6641	.9598	.6864	.9598	.9487
June	.1219	.4161	.7178	.8817	.6641	.9598	.9288
July	.1257	.4161	.8203	.8147	.6529	1.0100	.8873
Aug.	.1257	.4161	.8817	.6975	.6306	1.0156	.7813
Sept.	.1319	.4554	.9487	.6529	.6306	1.0264	.6975
Oct.	.1520	.4161	.9710	.6194	.6362	1.0603	.6806
Nov.	.1743	.4161	1.0324	.6250	.6008	1.0938	.6478
Dec.	.1551	.4520	1.0324	.6138	.6975	1.0045	.6250

NAILS: Wire, 8-penny, fence and common.

[Price per 100 pound keg on the first of each month f. o. b. mills or Pittsburg; quotations computed from base prices published in the Iron Age.]

Month.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1900.	1901.	1902.	1903.
Jan.	\$3.375	\$2.55	\$2.20	\$2.00	\$1.70	\$1.475	\$2.45	\$1.325	\$1.55	\$1.45	\$3.30	\$2.30	\$2.10	\$2.00
Feb.	3.375	2.625	2.20	2.00	1.725	1.50	2.85	1.425	1.55	1.70	3.30	2.40	2.15	2.00
Mar.	3.30	2.625	2.20	2.05	1.65	1.50	3.00	1.50	1.60	1.95	3.30	2.40	2.15	2.10
Apr.	3.10	2.60	2.20	2.15	1.625	1.50	3.00	1.55	1.40	2.10	3.30	2.40	2.15	2.10
May	2.825	2.50	2.25	2.15	1.60	1.475	3.15	1.45	1.40	2.20	3.30	2.40	2.15	2.10
June	2.75	2.45	2.175	2.00	1.40	1.80	3.15	1.475	1.40	2.45	2.30	2.40	2.15	2.10
July	2.75	2.45	2.225	1.95	1.75	2.15	3.15	1.50	1.40	2.45	2.30	2.40	2.15	2.10
Aug.	2.875	2.425	2.275	1.95	1.725	2.65	3.15	1.35	1.35	2.60	2.30	2.40	2.15	2.10
Sept.	2.925	2.40	2.225	2.025	1.65	2.85	3.15	1.50	1.40	2.75	2.30	2.40	2.15	2.10
Oct.	2.85	2.35	2.175	1.975	1.60	2.85	3.15	1.60	1.45	2.90	2.30	2.40	2.15	2.10
Nov.	2.75	2.30	2.10	1.85	1.60	2.85	3.15	1.55	1.40	3.05	2.30	2.275	1.975	2.10
Dec.	2.70	2.25	2.05	1.80	1.50	2.85	1.35	1.50	1.35	3.05	2.30	2.29	1.975	2.00

PRICES OF CRUDE PETROLEUM AND REFINED 150° WATER-WHITE PETROLEUM, 1890 TO 1903.



— = CRUDE PETROLEUM. — = REFINED 150° WATER-WHITE PETROLEUM.

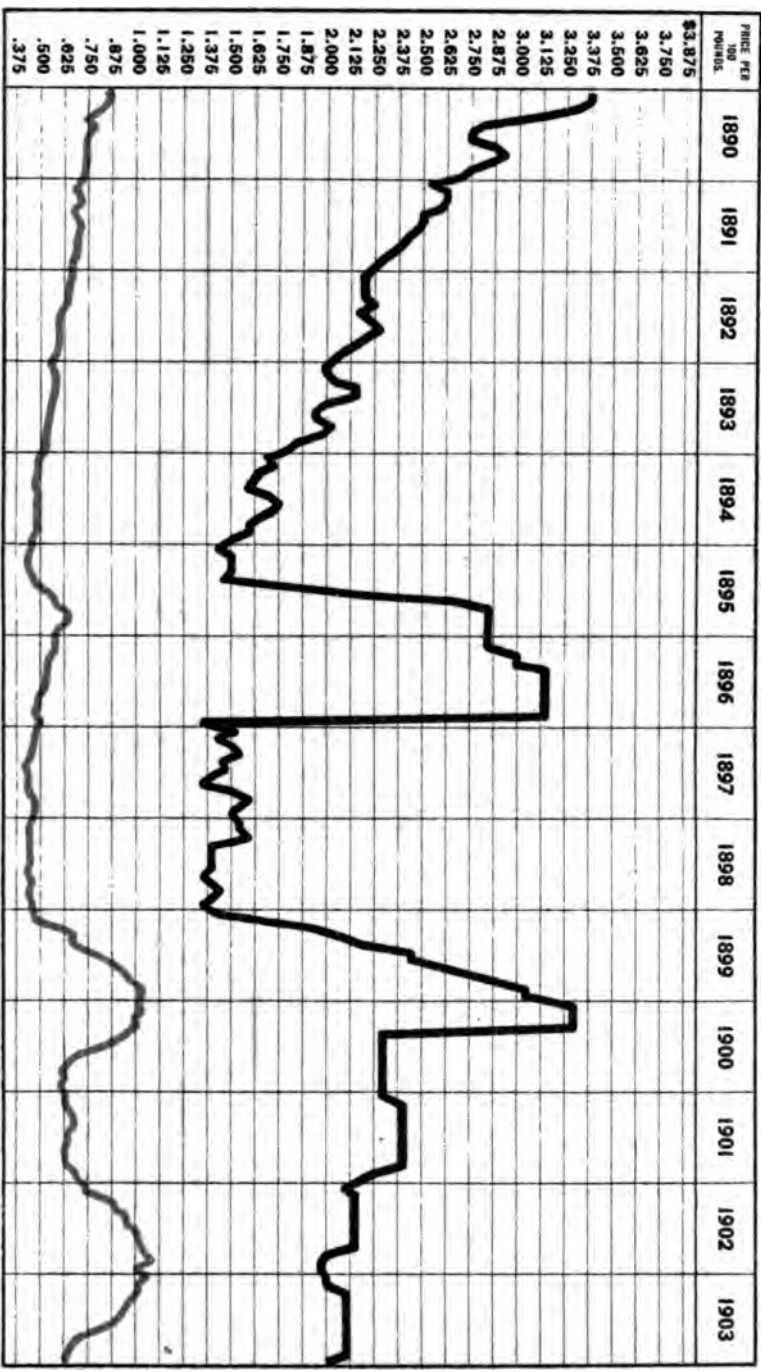
TABLE 4.—ACTUAL WHOLESALE PRICES OF CERTAIN GROUPS OF RELATED ARTICLES, 1890 TO 1903—Concluded.

BARB WIRE: Galvanized.

[Average monthly price per 100 pounds in Chicago; quotations from the Iron Age.]

Month.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
Jan.....	\$3.8500	\$3.2750	\$2.9585	\$2.65	\$2.25	\$1.90	\$2.025	\$1.90	\$1.90	\$2.05	\$4.13	\$2.95	\$3.01	\$2.68
Feb.....	3.9250	3.2500	2.9458	2.60	2.25	1.90	1.975	1.85	1.90	2.25	4.13	3.05	3.10	2.75
Mar.....	3.9063	3.3320	2.8850	2.60	2.30	1.95	1.95	1.90	1.90	2.625	4.13	3.05	3.10	2.80
Apr.....	3.7350	3.3320	2.8250	2.60	2.20	1.90	2.05	1.80	1.875	2.80	3.88	3.05	3.10	2.77
May.....	3.4188	3.3320	2.8125	2.60	2.15	1.95	2.15	1.80	1.80	2.95	3.13	3.05	3.10	2.75
June.....	3.4625	3.3320	2.7650	2.55	2.20	2.10	2.00	1.75	1.80	3.20	3.13	3.05	3.10	2.75
July.....	3.5000	3.3320	2.7750	2.525	2.25	2.15	2.00	1.75	1.80	3.30	3.10	3.05	3.05	2.75
Aug.....	3.5000	3.2830	2.6900	2.50	2.25	2.55	1.90	1.65	1.80	3.40	3.10	3.05	3.00	2.75
Sept.....	3.4875	3.2830	2.6625	2.45	2.20	2.85	1.85	1.80	1.80	3.675	3.00	3.05	3.00	2.75
Oct.....	3.5000	2.9585	2.5750	2.40	2.15	2.85	1.85	1.80	1.825	3.775	3.00	3.05	2.68	2.75
Nov.....	3.2625	2.9585	2.6500	2.40	2.00	2.85	1.85	1.80	1.825	3.88	3.00	3.05	2.60	2.75
Dec.....	3.2500	2.9585	2.6500	2.35	1.90	2.00	1.95	1.80	1.825	4.13	3.00	3.00	2.60	2.60

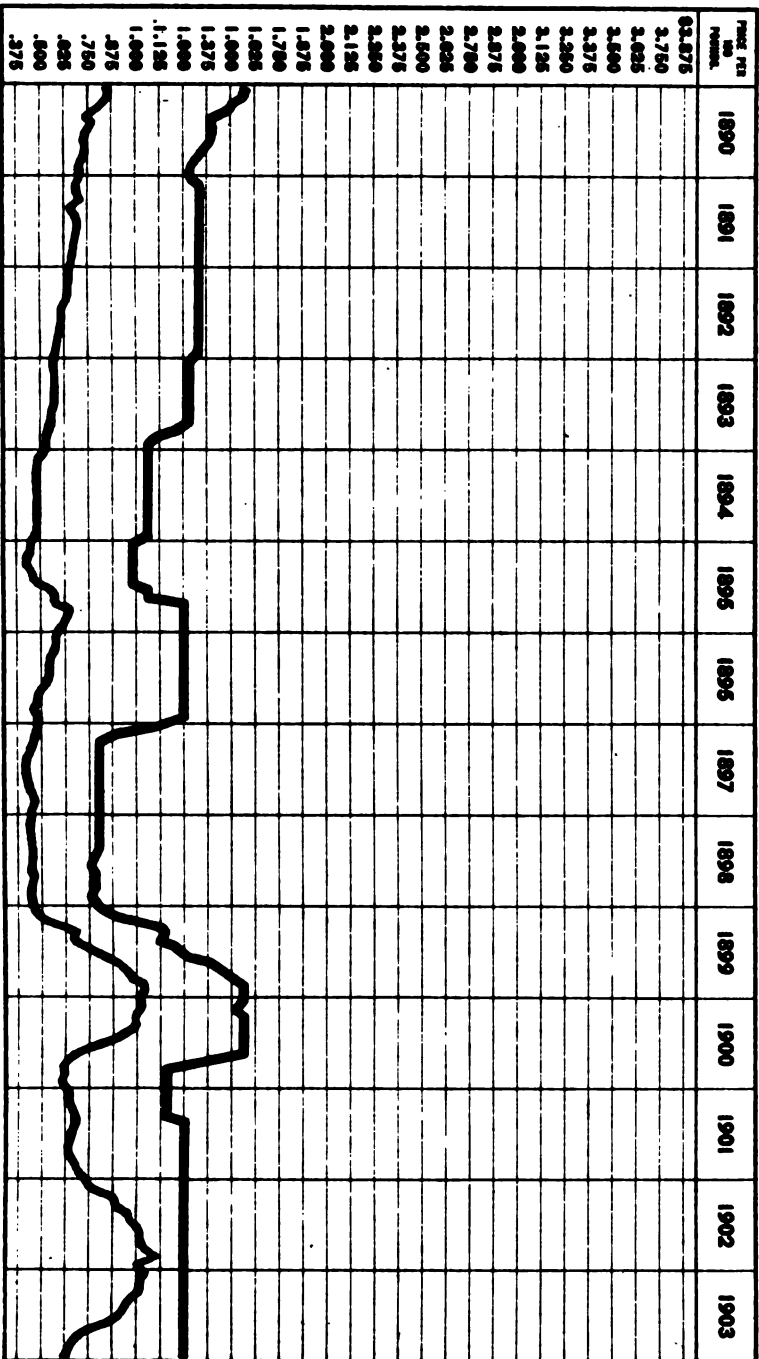
PRICES OF FOUNDRY NO. 2 Pig IRON AND EIGHT-PENNY WIRE NAILS, 1890 TO 1903.

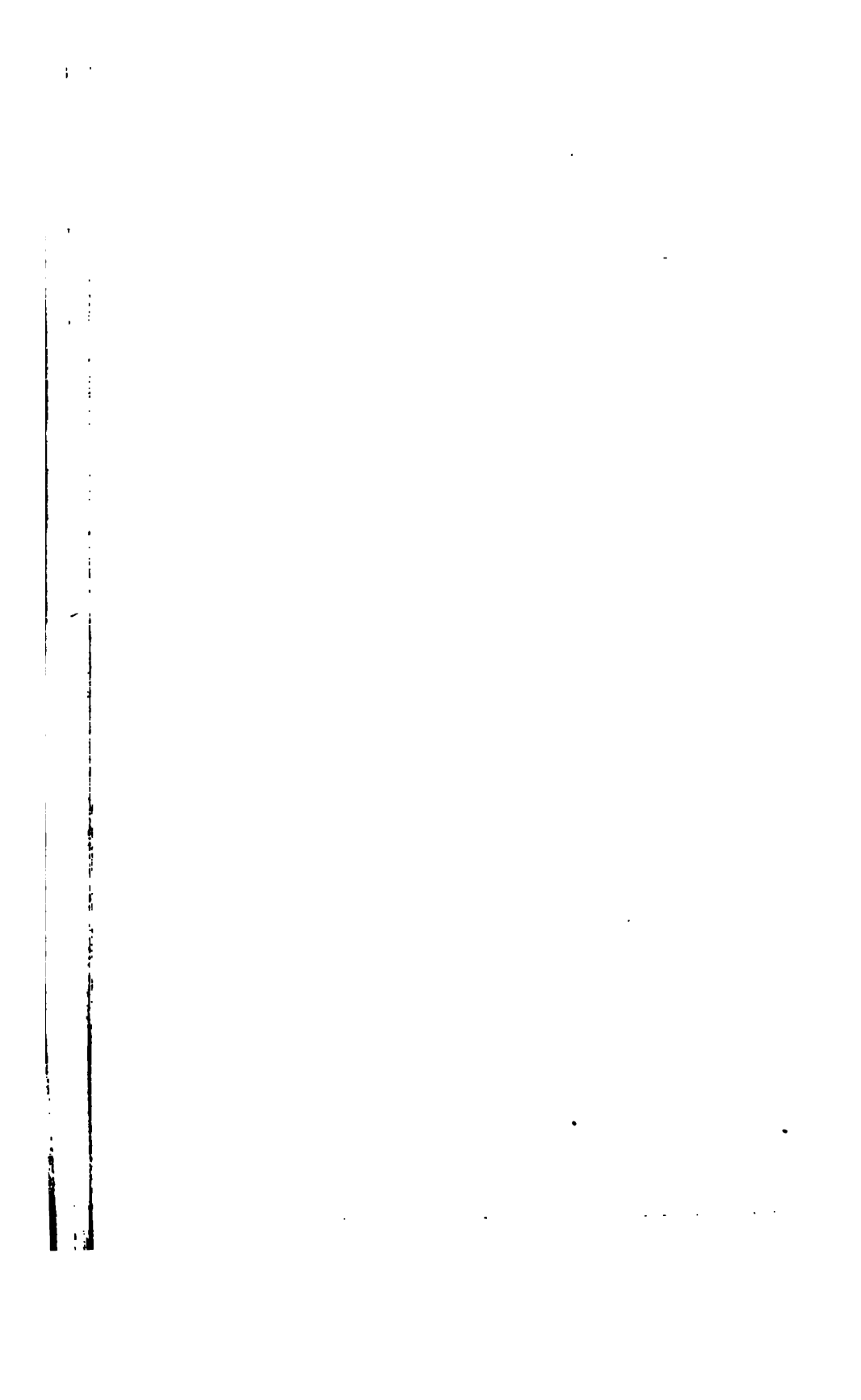


— = FOUNDRY NO. 2 PIG IRON. - - - = EIGHT-PENNY WIRE NAILS.

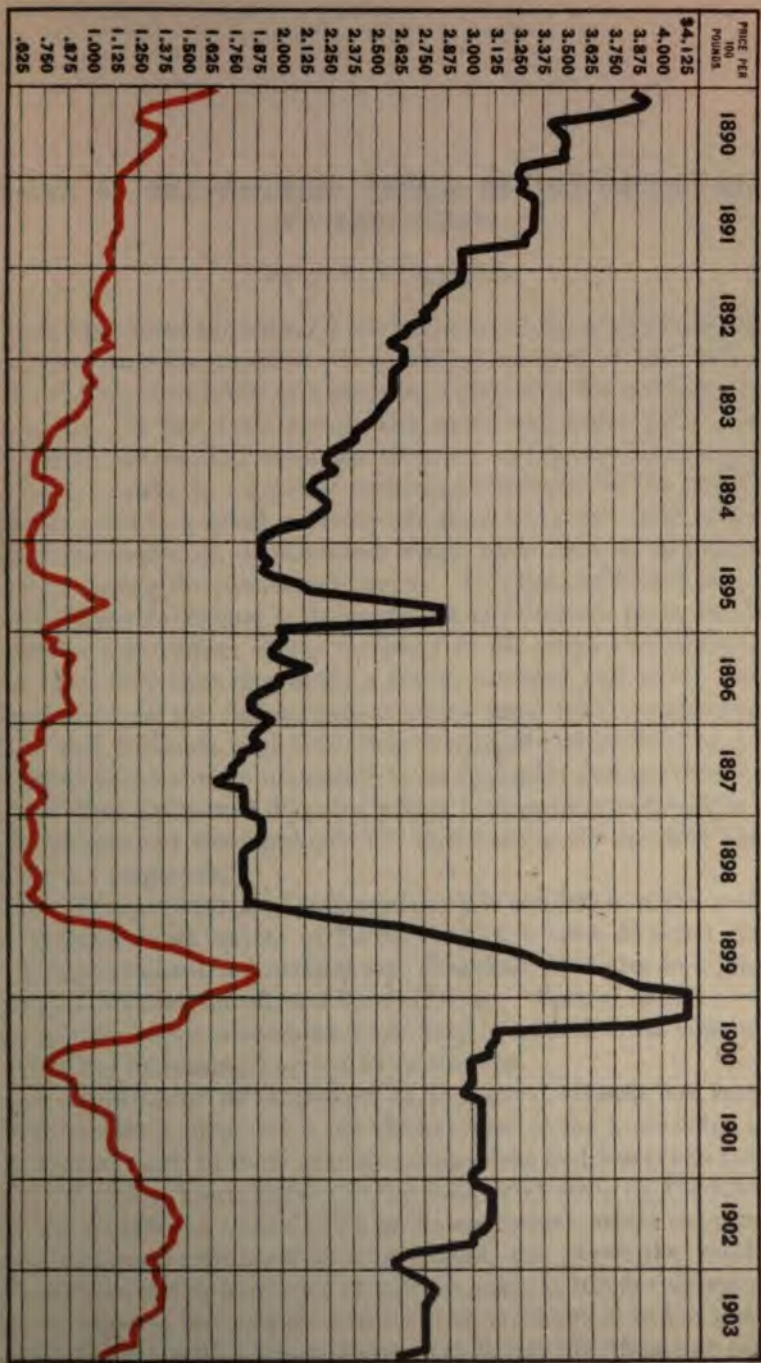


PRICES OF FOUNDRY NO. 2 Pig IRON AND STEEL RAILS, 1890 TO 1903.





PRICES OF STEEL BILLETS AND GALVANIZED BARBED WIRE, 1890 TO 1903.



— = STEEL BILLETS. — = GALVANIZED BARBED WIRE.

HOUSING OF THE WORKING PEOPLE IN THE UNITED STATES BY EMPLOYERS.

BY G. W. W. HANGER.

One of the most important features in the industrial life of the last decade has been the rapid development on the part of both large and small employers of labor of a growing interest in the welfare of their employees. It has been recognized more and more fully that the establishing of cordial relations between employers and employees invariably results in a greater industrial efficiency on the part of the workman, and in a great measure obviates the costly and sometimes destructive industrial disturbances which have been so unfortunately frequent during the past twenty years. Interest and confidence on the one hand have developed in the workman a livelier and more intelligent regard for the welfare of the business of his employer, while on the other hand they have prompted a frank, rational, and more unselfish discussion of all the various causes which have been so productive of strikes and lockouts, and thus have frequently given rise to a spirit of mutual concession so necessary to an equitable and peaceful adjustment of these industrial disputes which have proved not only harmful to the business of the employer but injurious to the comfort and welfare of the employee.

These measures for the betterment of the condition of the workman have taken a great variety of forms, and have been directed not only to his improvement industrially and financially, but also in a physical, social, intellectual, moral, and domestic way. Special efforts in one or more of the above directions have been put forth from time to time by a rapidly increasing number of employers.

The establishing by employers of industrial schools has furnished workmen with a surer basis for the exercise of the knowledge gained by practical work in their various occupations and has given them the means of rising more rapidly in the industrial scale by the taking up of more skillful and more highly paid occupations, while the establishment of manual-training classes or schools has given the children of the workman the opportunity of gaining early in life not only a degree of knowledge of the simpler elements of mechanical work, but also a manual facility with various tools that better fits them for entrance into active work in the industrial world.

Of the various special means afforded the workman by the employer for direct financial betterment, one of the most important, perhaps, is that of sharing with him the profits of his business. This share of the workman usually takes the form of a cash dividend based on the amount of his wages and measured by the varying business prosperity of the establishment in which he is employed. The special interest of the workman in the business of his employer is sought in some instances by encouraging and assisting him in the purchase of stock in the establishment. In other instances his interest is enlisted and intensified by the offering of prizes for valuable suggestions relative to improvement in methods of work and in the means of production, while in still other instances rewards are given for faithful service or zeal and interest in the work of the establishment. Some employers have promoted the financial and material welfare of their employees by establishing or assisting in establishing building and kindred associations, by furnishing savings-bank facilities, etc.

The physical condition of employees has likewise been considered by many employers, and its improvement encouraged by the forming of recreation clubs of many kinds among their employees. Gymnasiums have been built and instructors in physical culture and calisthenics provided. In many factories excellent bathing facilities are now found where formerly no adequate provision was made, and quite generally it is found that greatly improved sanitary appliances of various kinds have replaced the conditions of a decade ago. The furnishing of hot lunches and even dinners to employees at a nominal price is a feature of very many establishments, while the provisions for caring for the sick and disabled are most complete in some industrial concerns. Free sick and accident insurance are sometimes given, while in other cases free medical attendance and hospital facilities are provided. The encouragement by employers of the formation of beneficial organizations of employees has also resulted in increased comfort in sickness and accidents, while the actual contribution by the employer of the whole or a part of the wages of the disabled employee is the practice in some establishments. In enumerating some of the means taken for the betterment of the physical condition of employees, reference should also be made to the gradual shortening of the hours of labor in very many establishments, thus giving greater opportunity for the enjoyment of recreations which tend toward health and contentment.

Nothing has perhaps contributed more to the cordial relations existing between the employer and employees in some establishments than the efforts made by the former to promote the social welfare of his working people. In many cases more or less elaborate halls and meeting places have been provided where employees are welcomed and entertained in a variety of ways. Concerts, musical entertainments,

lectures, etc., are given, while in many cases social, musical, and other clubs of employees contribute the entertainment. Dances and other social gatherings are frequent, while provision is also made in very many instances for those who desire to engage in billiards, cards, and other games.

In many establishments provision is made also for the intellectual betterment of the employees. The efforts in this direction consist in educational classes and clubs, in free lectures, in free libraries, etc. Special encouragement is given in many cases, also, to the efforts made for the moral welfare of employees. Sunday schools are organized and general religious work aided in every possible way.

The effort to aid employees in the betterment of home conditions is a most important feature of the work of many establishments. Sewing, cooking, and housekeeping classes are organized and placed under the instruction of competent teachers. Landscape and kitchen gardening are encouraged, and in many cases instruction is given and seeds, plants, shrubs, etc., are furnished free to employees and their families, prizes being given for the best results of work in this field. Attention is also given to instruction in regard to the exterior and interior decoration of the home.

Among the most important of all the work done in this particular direction, perhaps, is the provision for improved and sanitary working and living conditions for employees. In the enumeration of the means of betterment put forth by employers it has been possible to give but a suggestion of the very many forms which this welfare movement has taken. Likewise, in planning for an exhibit which should illustrate this movement in the United States, it was seen to be quite impossible to consider more than a small proportion of the various means which have been employed to improve conditions. In view of the comparatively limited space which could be given to an exhibit of this character, it was deemed best to concentrate attention on some special form of the movement. The interest of the public in housing conditions in general, both in this country and abroad, marked as the subject for investigation and exhibit the housing of the working people in the United States by employers. Sixteen industrial establishments have very kindly contributed the photographs, plans, and information which serve as the basis for the exhibit itself and the brief description which follows. It is believed that the work of these establishments in the direction of furnishing and encouraging better housing conditions, so far as their employees are concerned, is thoroughly representative of the various forms which this particular effort has taken. It has not been possible to ascertain that other establishments in the United States have been engaged to any great extent in similar work, although every effort was made to cover the field as thoroughly as possible. To illustrate the housing work of these

establishments an exhibit was prepared consisting of 285 photographs and plans, and a part of these are reproduced herewith. The 16 establishments contributing to the exhibit are as follows:

- American Waltham Watch Company, Waltham, Massachusetts.
- Colorado Fuel and Iron Company, Pueblo, Colorado.
- J. B. & J. M. Cornell Company, Coldspring, New York.
- The Draper Company, Hopedale, Massachusetts.
- Ludlow Manufacturing Associates (133 Essex street, Boston, Massachusetts), Ludlow, Massachusetts.
- Maryland Steel Company, Sparrows Point, Maryland.
- N. O. Nelson Company, St. Louis, Missouri.
- Niagara Development Company, Niagara Falls, New York.
- Peacedale Manufacturing Company, Peacedale, Rhode Island.
- Pelzer Manufacturing Company, Pelzer, South Carolina.
- Plymouth Cordage Company, North Plymouth, Massachusetts.
- John B. Stetson Company, Philadelphia, Pennsylvania.
- S. D. Warren & Co., (Cumberland Mills), Westbrook, Maine.
- Westinghouse Airbrake Company, Wilmerding, Pennsylvania.

In a large proportion of these establishments it will be seen that houses were built for the special purpose of renting to employees at the lowest possible figure consistent with the cost of a modern sanitary dwelling; in some establishments, on the other hand, the purpose was to build houses for sale to employees practically at cost and on easy terms. In one of the establishments no houses were built, but a large boarding house was provided for the accommodation of its unmarried female employees, of which there was a large number. In another establishment which did not build houses the encouragement of better housing conditions consisted in the organization of a building and loan association among its employees and the free distribution of stock of this association to certain employees as a reward for efficiency and zeal in their work. It will be seen also that the efforts looking to the betterment of conditions among the employees of these establishments were not confined to the particular subject of housing but extended in many other directions. These are briefly mentioned in connection with the descriptions which follow.

AMERICAN WALTHAM WATCH COMPANY, WALTHAM, MASSACHUSETTS.

Although this company does not at the present time give its attention to the building of dwellings for its employees, it has for many years maintained a large boarding house, erected for the accommodation of its unmarried female employees. The present structure is the result of additions made to a building erected by the company in 1865 for the purpose of providing comfortable housing facilities for such employees at the lowest possible cost.

The original building was $2\frac{1}{2}$ stories in height, but with the growth and development of the company's business and the intro-

duction of modern methods of manufacture, permitting the employment of a much larger proportion of female help than formerly, the need of making greater provision for the comfortable housing of that class of labor became apparent. To meet this need and also to insure against an unreasonable price for girls' board on the part of private boarding houses, the company greatly enlarged the old building, furnished it throughout, and fixed a price for board easily within the reach of all. The late John Swinton, of New York, whose reputation as a writer devoted to the interests of labor is well known, spent a week as the guest of this house in 1887, and the account furnished by him, supplemented by more recent data supplied by the company, has been freely drawn upon in the preparation of this description. The "Adams House," as it is called, is a roomy, four-story, wooden structure, with a wide piazza in front, and surrounded by well-kept and attractive grass plots. The sleeping rooms, of which there are at the present time 67, are plainly but comfortably furnished, well lighted, well ventilated, and heated by steam. The usual articles of furniture are a table, a washstand, a chest of drawers with looking-glass, an armchair, a rocker, and an ordinary chair, and a broad, comfortable bed. A small closet serves for keeping trunks and clothes, and on the walls, which are neatly papered, are a few pictures. Each of these rooms is occupied by two young women, who are expected to keep them in good condition and are encouraged to adorn them with engravings, books, growing flowers, etc. At the present time two near-by houses are leased to furnish additional dormitories for those who desire to board at the house, even though they are compelled to room outside.

The dining hall is capable of accommodating all the boarders at once. In all, meals are served to about 300 persons. To Mr. Swinton we are indebted for the following highly interesting description of this feature of the establishment:

I found the table supply to be varied and abundant, or rather superabundant. The bill of fare for the first day may be given here as a fair example of the daily table. The house bell was rung at 6 o'clock, and in half an hour we were all ready for breakfast, which, too, was ready for us. We had the best of beefsteak, with baked potatoes, boiled eggs, white and brown bread, biscuits, doughnuts and snaps, butter and condiments, coffee and tea. Clean table napkins were beside every plate. At a few minutes after 12 the great rush of the hungry damsels is repeated. For dinner we had soup, scalloped oysters, roast beef and mutton, boiled potatoes, celery and pickles, pudding and pie, with tea, coffee, and pitchers of milk. For supper we had cold meats, cheese, various kinds of bread, and "fixings," and again coffee, tea, or milk. Another day we had poultry at dinner; another morning we had country sausage, besides omelette and chops, as well as ham, for breakfast; another evening we had canned fruits for supper. At all

the meals throughout the week there were daily variations in the fare. As for the appetites, so far as a stranger could take notice of such things, they were somewhat amazing to a man who is unaccustomed to sitting down at table with such an array of Yankee girls.

The price of board and lodging in this establishment is fixed at \$6 per week, the company not wishing to profit from its management, but being satisfied to see only an equality of income and expense. This rate influences in a large degree the prices charged by keepers of other boarding houses in the city for female operatives.

There are two large parlors tastefully furnished which are open all hours to every boarder. A cheerful, homelike atmosphere pervades the house and no restraint is placed upon the freedom and movements of the inmates. As might be expected from the high class of wage earners to which these young girls belong, the social life of the house is both animated and recreative. To quote Mr. Swinton again:

In the evening there were lively times all over the house. Bevises of girls were seen every where. They sang, they romped, they thrummed the piano, they played games, and a few took side-long glances at the visitor, who gazed with interest upon them. Some of them went out visiting or shopping. Some went to "sociables," public or private, some attended the grand and dress reception to invited guests in our big parlor, two or three more may have gone to prayer meeting, a half dozen struck into a walking match on the highway, some gathered in gossiping groups, while others, I was told, stayed in their rooms to stitch, or to read or write. Soon after 9 o'clock they begin to retire, and by 10 all is quiet in the house, though the watchman is always there to answer the bell.

The entire business of the house is managed for the company by an experienced agent and his wife, who procure the supplies, hire the servants, superintend the kitchen, provide the table, and look after the general service.

There is also a boarding house for men, not maintained directly by the company, but at which the latter, in return for certain privileges granted, has the authority to prescribe the rates. These rates are \$1.50 per week each for two men occupying the same room. Married men are charged \$2 a week for their wives' board. At this house, as at the other, there are many persons who engage only table board, preferring to secure their lodging elsewhere. It should be understood that it is a privilege, not a requirement, for anyone to board at either of these houses. All employees are free to select such quarters as may suit them, either with the families of fellow-operatives or in other households of the city. The utmost freedom prevails in this respect. "The advantage that the company secures to the employees by the two big boarding houses under its supervision, direct and indirect, is that by this means the prices of board are established for the whole town, so far as concerns the watch-factory men and women, at as low rates as are consistent with good living and proper quarters." In the

early days of the company's existence many houses, mostly of modest proportions, but sufficiently ample for the demands of the times, were constructed and rented to the company's employees at very reasonable prices. The company at that time had a large amount of unoccupied land, much of which had been laid out in streets and building lots, on which the houses were erected. In that way, in connection with private enterprise, sufficient accommodations were provided for the families of employees. With the growth and development of the watch industry in Waltham the demand for houses increased, and the liberal wages paid enabled many employees to build homes for themselves, and on a scale of much greater expense than those originally built, the value of many of them, including the ground, ranging from \$2,000 to \$5,000. In this way practically all of the land owned by the company was sold and built upon. Nearly all of the houses erected by the company have since been purchased either by the occupants or by those desiring investment.

More than one-fourth of the married employees now own their homes, and the proportion is increasing year by year. These are probably among the best homes for workers in the country. The company now owns very little unoccupied land, and does not contemplate building additional tenements, but it has always shown itself ready to lend financial assistance to deserving employees desiring to build homes for themselves. For this there is now very little occasion, however, as there is in the city of Waltham a cooperative bank, or building and loan association, started mainly by workers in the watch factory, which has become one of the largest, as it is one of the oldest, institutions of the kind in the State.

While the company is sincerely interested in the comfort and well-being of its employees, it has aimed to avoid anything suggestive of paternalism. Its 3,400 working people, nearly all of whom are Americans by birth, are of a high class and entirely able to care for themselves, the rate of wages maintained being sufficient to enable them to live comfortably.

The Watch Factory Mutual Relief Association was organized in order to secure to its members the advantages of mutual aid in case of need. This organization had a membership, on January 1, 1899, of 1,033 men and women. Its constitution provides, among other features, for a visiting committee, whose duty it shall be to render timely assistance to sick members, who are entitled to draw from the treasury the sum of \$4 per week for a period not exceeding ten weeks. In the event of death \$50 is paid for funeral expenses. The cost to each member is 25 cents a month and the company contributes \$200 a year. The surplus on hand January 1, 1899, amounted to \$1,772.87. The work of the association is carried on in the factory during working hours.

Provision for the intellectual and social life of its workers is left by the company to the community, of which its employees form so important a part, and which possesses, among other advantages, a fine public library, an excellent school system (including a manual training school), lecture courses, musical organizations, and all the higher forms of social amusements. Many of the workingmen and women are stockholders in the company. The most amicable relations have always existed between this company and the people in its employ. No strike has ever occurred to mar the friendly feeling, employers and employees recognizing the existence of mutual rights and mutual obligations.

COLORADO FUEL AND IRON COMPANY.

This company which operates a large number of coal, iron, and other mines scattered throughout Wyoming, Colorado, Utah, and New Mexico, in addition to rolling mills at Laramie, a huge steel plant at Pueblo, and two railway systems, and whose pay rolls carry the names of nearly twenty thousand employees, has for a number of years been directing its efforts in a practical and intelligent manner toward bettering the condition of the vast army of people dependent on its various enterprises for support.

Among the numerous measures adopted for the accomplishment of this end, the substitution by the company of neat and comfortable dwellings for the usual squalid and insanitary miner's shack (Plate 76) must be reckoned one of the most important. Numbers of such houses have been constructed by the company at all of its leading mining camps and manufacturing centres forming, by their varied color and design, most picturesque and attractive villages. To those familiar only with the old style of mining communities, with their rude log cabins or adobe huts, these modern cottages, equipped in many cases with running water and electric lights, are a source of great surprise. Tercio and Redstone are two good examples of the villages recently founded by the company. Other notable examples are those of Primero, Segundo, El Moro, Sunrise, and Smiths Canon. At Coalbasin, in 1901, the company erected over 70 cottages. They are warm and comfortable, containing from 3 to 6 rooms plastered and finished throughout in modern style. At Segundo about 150 houses have recently been completed. These are all plastered and neatly finished within, provided with porches and projecting eaves, and painted in varied and harmonious colors. Arranged in regular order upon streets, they appear to decided advantage by the side of the older and more poorly disposed dwellings of the place.

The group of dwellings erected at Jansen, Las Animas County, for the occupancy of the company's railway employees is also worthy of mention.



PLATE 76—TYPICAL OLD-STYLE DWELLINGS OF MINING EMPLOYEES

COLORADO FUEL AND IRON COMPANY

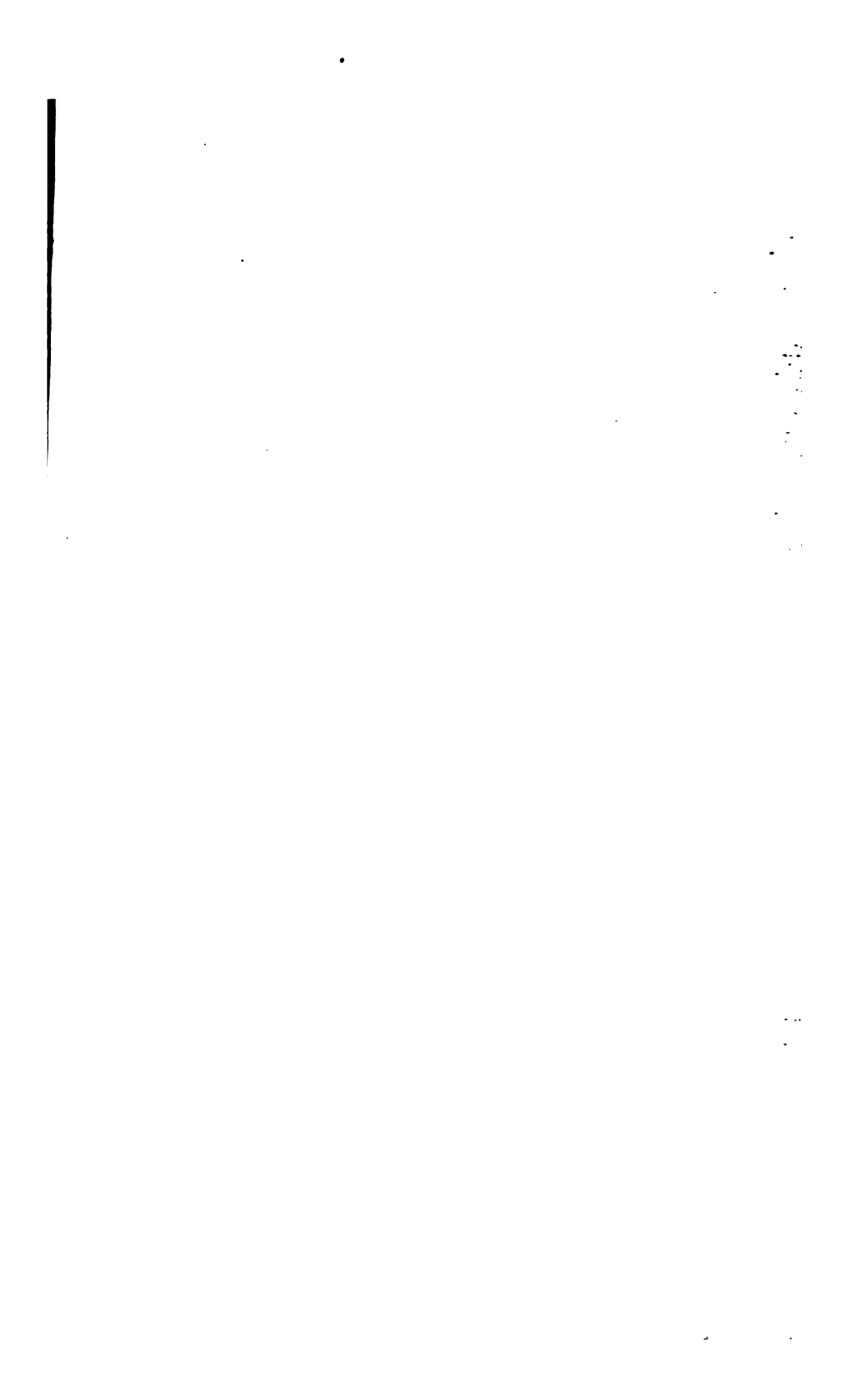




PLATE 77—HOUSES FOR MINING EMPLOYEES, SEGUNDO, COLORADO



PLATE 78—HOUSE FOR EMPLOYEES, ROUSE, COLORADO

COLORADO FUEL AND IRON COMPANY



Although a detailed description of the houses built by the company at the various mining camps and other places of industry for the accommodation of employees can not be attempted here, the accompanying photograph (Plate 77) showing a portion of Segundo will give one a fair idea of the general style and appearance of these buildings. They usually contain from 4 to 6 rooms each, and, while very simple in arrangement and in architectural effect, they are comfortable, convenient, sanitary, and homelike. The price charged for rent is uniform throughout all the camps, being fixed at \$2 a room per month, or \$8 for a 4-room house.

In a number of camps the company has erected houses for the accommodation of teachers of the public schools and kindergartens, which are intended to serve as models for camp housekeepers and to furnish a center for sociological work. In these the teachers have as many rooms reserved for their use as are needed, leaving the remainder of the house to the occupancy of a family in order that the teachers may not live entirely alone. At Redstone a small cottage has been set apart as a special object lesson to employees. It is furnished throughout in inexpensive but artistic style and is designed to show how much can be accomplished in the way of making a home attractive with a small outlay of time and money. "Casa Vivienda," at Pueblo, is another example of the model home. The style and size of the houses vary according to the class of employees for which they are intended.

In order to unite and systematize the various efforts being put forth for the betterment of social conditions among its employees, the company organized, in 1901, a sociological department, which has already demonstrated its practical utility in the field to which its energies have been directed. The order creating this department stated that it "shall have charge of all matters pertaining to education and sanitary conditions and any other matters which should assist in bettering the conditions under which our men live." Dr. R. W. Corwin, chief of the company's corps of surgeons, was appointed superintendent, with a staff of officers and assistants to aid in carrying forward the work. The aim of the department is, in the words of Doctor Corwin, to be "not only an aid to the company, but a benefit to the employees and their families, a means of educating the younger generation, of improving the home relations, and furthering the interests of the men, making them better citizens and more contented with their work." It makes its influence felt in the public schools, where it urges that good buildings and equipments be provided, competent teachers chosen, and free text-books and supplies furnished to pupils.

Owing to the diverse elements combined in the 32 nationalities speaking 27 languages which are represented in the different mining camps and other properties of the company, and to the fact that these camps are scattered over an expanse of territory more than 1,000 miles

In extent, the task before the department is a unique and by no means simple one. Many of the company's employees are drawn from the lower classes of foreign immigrants, Italians, Austrians, Germans, and Mexicans predominating, whose primitive ideas of living and ignorance of hygienic laws render the department's work along the line of improved housing facilities and instruction in domestic economy of the utmost importance. In cooperation with the medical department maintained by the company considerable sanitary improvement has been made throughout the system. New camps have been laid out with reference to proper sanitation, model dwellings have been erected, old houses have been renovated and remodeled, and general sanitary measures, such as the cleaning out of cisterns and wells and the systematic removal of garbage and other refuse, have been instituted. Among other features introduced by the department for the betterment of social conditions at the various mining camps and other communities are clubs for adults and for children, reading rooms, circulating libraries, kindergartens, industrial classes, recreation halls, entertainment courses, and instruction in cooking and sewing.

In addition to these agencies a weekly magazine, "Camp and Plant," has been established, which has proved an invaluable aid to the department in bringing the various camps and works into closer touch and in furnishing a medium through which the people can be reached. This magazine is well edited, illustrated with half-tone engravings from photographs taken in the different camps and plants of the company, and is filled with useful information and news. Portions of it are printed in Italian, German, and other languages for the benefit of foreign employees. The subscription price is \$1 per year, and the magazine enjoys a well-deserved popularity among the miners and other workmen in the company's employ.

At the end of each fiscal year the department issues a report reviewing the work accomplished during the year and advocating such changes and innovations in the social-betterment system as are deemed expedient. These reports as well as the magazine, *Camp and Plant*, have been freely drawn upon for the information contained in this description.

The system of public schools in operation at all of the leading points where works of the company are located is worthy of more than casual mention. In these schools a uniform course of study has been adopted, so that children may not be placed at a disadvantage in case of removal from one camp to another. Text-books are in most cases furnished to pupils free of charge, equipment of the most approved character is provided, only the best and most capable teachers are employed, and every effort is made to impart instruction of the most thorough and substantial character. Circulating art collections, reference libraries, and other progressive features have been introduced into nearly all the

schools, and the children have been encouraged to raise money for the purchase of pianos, books, flags, and pictures and casts for the decoration of their rooms. The school buildings are, as a rule, handsome and comfortable structures, furnished with modern appliances and well lighted and ventilated throughout. A fair type is that shown in the photograph (Plate 80) which represents the new schoolhouse at Redstone, recently erected by one of the prominent officials of the company and presented to the people of that place. These buildings, though differing in size and in minor details of finish and ornamentation, are practically all of the same design. The schoolrooms measure about 30 by 33 feet and are calculated to seat 50 pupils each. Ceilings are 11 feet high in the lower story and 10 feet in the upper, thus providing each child with from 200 to 220 cubic feet of air. Each room has windows on the back and side which admit an abundance of light, without injury to the eye of teacher or pupil. Folding partitions between rooms allow them to be thrown into one whenever occasion requires. Ventilation registers in the corners of each room have their flues connected with a ventilator stack in the center of the roof. A vestibule about 16 by 18 feet serves as a place for hats and coats, and rear exits on each floor afford a means of escape in case of fire.

Comfortable four-room structures have recently been completed at Primero, Segundo, and Tercio. At Orient a company building has been converted into a neat and attractive schoolhouse, while at Coal-basin the building has been thoroughly remodeled and put in first-class condition throughout. At several of the newer camps company houses have been utilized for school purposes until suitable buildings could be erected. In all cases where sufficient funds for the establishment and maintenance of public schools are not available, the company willingly advances the necessary amount until the school districts can meet these expenses.

A feature of the educational system to which special emphasis is given is the kindergarten. It is recognized that this institution not only takes the child in hand at its most impressionable period, but that it furnishes a center from which radiate influences that affect the whole social betterment situation. The morning hours from 9 to 12 are devoted to the regular kindergarten work, consisting of songs, games, nature studies, and various kinds of easy construction work, such as weaving rag and zephyr mats and rugs, braiding straw hats and baskets, and making pieces of miniature furniture. In the afternoon the same room is utilized, under the supervision of the teacher, by classes of boys and girls engaged in weaving, basketry, carving, sewing, and cooking, by physical culture clubs, mothers' clubs, and other gatherings of a social or industrial nature. In the evening the room is at the disposal of adults for dances, concerts, lectures, and other entertainments. A few of the kindergartens are housed in buildings erected

especially for their use, but in most cases they occupy rooms in the public school.

The Pueblo Normal and Industrial School offers to teachers of the public schools and kindergartens a course of training during a portion of the summer vacation by means of which they may better equip themselves for their work. The building, which was formerly used as a hospital, has been thoroughly renovated and refitted, and, although the school is yet in the experimental stage, its good results are already becoming manifest. As an adjunct to this school there has recently been created an industrial home in which crippled employees and the widows and orphans of those who have lost their lives in the company's service are given the means of earning a livelihood. In it the young are to be given an opportunity to learn a trade, the adults to work upon whatever they can do best and to receive therefor the highest possible prices. Mattresses of excellent quality are already being turned out and it is the intention to begin at an early date the manufacture of brooms, brushes, rugs, laces, hammocks, and other articles. It is planned that the institution shall become eventually self-sustaining and, though yet in its infancy, much good is expected from its establishment. The Polytechnic Club rooms are also located in this building. The membership of this club is made up largely of engineers from the Minnequa steel works.

In a number of the camps night schools have been established which are well attended, particularly by the foreign employees. The branches taught are English language, reading, writing, and arithmetic, and in some cases history and geography. These schools are self-sustaining, each pupil being charged \$1 per month to cover the cost of tuition, light, and fuel. Circulating libraries have been placed in most of the communities where they are proving a powerful factor for intellectual and moral development. Each library contains fifty volumes of fiction, history, biography, and travel, and the boxes are exchanged often enough to keep each camp provided with a fresh supply of books.

Another distinctly educational feature introduced by the company is the reading room. In this is always found a number of the latest magazines, newspapers, and periodicals, in addition to a reference library of maps, encyclopedias, and other standard works. One of the best examples is that known as the Minnequa Reading Room, at Pueblo, where the entire second floor of a large brick building, comprising a reading room, a card and game room, and two smaller rooms, is given up to the employees of the steel works as a place of recreation. At Orient and at Engle also there are well furnished reading rooms in connection with which are rooms for cards and other games. The expense of maintaining these institutions is met by means of dues, fees, and subscriptions, and by the proceeds from entertainments, supplemented whenever necessary by liberal contributions from the company.



PLATE 79—STREET IN REDSTONE, COLORADO



PLATE 80—SCHOOLHOUSE, REDSTONE, COLORADO

COLORADO FUEL AND IRON COMPANY

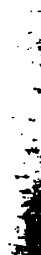




PLATE 81—CLUBHOUSE, PRIMERO, COLORADO



PLATE 82—CLUBHOUSE, REDSTONE, COLORADO

COLORADO FUEL AND IRON COMPANY





PLATE 83—REDSTONE INN, BUILT FOR USE OF EMPLOYEES



PLATE 84—MINNEQUA HOSPITAL, BUILT FOR USE OF EMPLOYEES

COLORADO FUEL AND IRON COMPANY

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Boys' and girls' clubs are also contributing to the social development of the various communities. These clubs meet once a week and engage in games, dances, contests, gymnastics, and various kinds of musical and literary exercises. In the boys' clubs military drills and athletics are quite popular, while with the girls special attention is given to cooking and sewing and other practical domestic work. The attendance upon these clubs is most encouraging and much practical work is being accomplished by them. Classes in household and domestic economy have also been organized among the women of most of the camps.

At Sunrise, Wyo., and Starkville, Colo., recreation halls have been built, in which the men may congregate to read, chat, smoke, and play games. The hall at Sunrise is equipped with a stage for entertainment purposes and contains an alcove which is used as a library. At the latter place the building, which is popularly known as "Harmony Hall," contains two large rooms, one used for kindergarten, the other for library and recreative purposes, and two smaller apartments utilized as kitchen and cloakroom. These buildings are quite popular with the employees and many socials, musicales, and other entertainments take place within their walls.

Clubhouses have been erected by the company at several points. These are intended as a check to the drink habit so prevalent among the men by furnishing a place where intoxicants can be purchased only under certain well-defined regulations, and where various forms of wholesome amusement are provided to take the place of the debasing and demoralizing features of the saloon. The accompanying photograph (Plate 81) shows the clubhouse at Primero, where liquors of all kinds can be had, but where no drunkenness or disorder is allowed. This is the only place in the village where intoxicants are sold. At the Floresta anthracite mine two rooms in the boarding house have been fitted up with billiard and card tables and provided with periodicals and writing materials for the accommodation of the miners. No provision is made for the sale of liquor. The Coalbasin clubhouse is a one-story frame building, of four rooms and cellar, with a front veranda. The bar is located immediately in the rear of the porch and is furnished in a very plain and unattractive manner; no display of bottles, pictures, or other suggestions to drink being permitted. To the right as one enters is the billiard and pool room, while to the left is a room for cards and games. On the extreme left is a reading room equipped with the latest magazines, newspapers, and periodicals. The furniture and furnishings are plain, but neat, and everything is conducted in a quiet and orderly manner. The following rules show how the affairs of the club are regulated:

1. The clubhouse will be open for the use of members from 9 a. m. to 10 p. m., daily, except Saturdays, when it will remain open until 11 p. m.

2. Members whose occupations are such as to require special working clothes are requested not to remain in the clubrooms in their working clothes.

3. No credit will be given to members or visitors. All charges must be paid at the time they are incurred.

4. No gambling will be allowed in the club, but playing games of cards for small stakes will be permitted, the stakes in no event to exceed the following limits:

Poker—Penny ante and twenty-five cent limit.

Billiards—25 cents per cue.

Pool—10 cents per cue.

5. Women or children residing in or near Coalbasin will not be allowed to visit the clubroom except at such times as may be specified by the board of directors.

6. Strangers, including women and children, will be permitted to visit the clubroom for purposes of inspection between 9 a. m. and 5 p. m., except Sundays and holidays, if provided with a permit from the board of directors.

7. No books or papers shall be taken from the clubrooms.

8. Members will be charged for any damage done to the furniture or fixtures of the club due to their carelessness or design.

9. No subscription paper shall be circulated, nor any article exposed for sale in the clubhouse without the authority of the board of directors.

10. Notices shall not be posted on the bulletin board, except upon authority of the board of directors.

11. All talking in the reading room is prohibited.

12. No member shall use the billiard or pool tables for more than three successive games to the exclusion of others desiring to play.

"NO-TREATING" RULE.

In order to promote the temperate use of wine, beer, and liquors, which may be sold in the clubhouse, no member or visitor shall be permitted to purchase or pay for a drink or drinks for any other member or visitor.

Membership in the club may be active or associate, only active members having the right to vote. Associate members are charged only half the dues paid by active members.

At Redstone a beautiful clubhouse and theater (Plate 82), complete in all respects, has recently been erected. Here is found a commodious lounging and drinking room, furnished with large leather-cushioned armchairs, settees, and tables for serving refreshments. An ample fireplace at each end of the room gives comfort and cheer on winter evenings, and entertainment is furnished by a large Regina music box and a graphophone. All kinds of the best grades of liquors may be had here at reasonable prices, while temperance drinks, sandwiches, and cakes are served at cost. Rules similar to those in force at the Coalbasin club are intended to check any tendency toward excess. Adjoining the lounging room is the large well-lighted billiard room,

equipped with one convertible and two pool tables. A card and game room furnished with cards, chess, dominoes, and other games, and a reading room, supplied with popular magazines and newspapers, are also reached through the lounging room. On the second floor is the hall, used for theatrical purposes, and provided with a full set of stage scenery, electric stage lights, and other up-to-date features. In the basement are located bathrooms, toilet and dressing rooms, liquor storage rooms, and the board of directors' room, and secretary's office. A furnace, also located in the basement, supplies steam heat throughout the building. On certain evenings of each month the privileges of the club are extended to the wives and daughters of members, when whist and euchre parties, billiards, pool, and instrumental music, and light refreshments lend interest and pleasure to the occasions. Active membership in the club may be obtained on payment of an initiation fee of \$1 and six months' dues in advance, at 50 cents a month.

The Redstone Inn (Plate 83), whose guests are nearly all employees of the company, is equipped with electric lights, steam-heating apparatus, hot and cold water, lounging and reading rooms, and all the other conveniences of a first-class modern hotel.

A washhouse is arranged for the accommodation of those who work about the company's coke ovens and coal tipples at Redstone. Its equipment comprises 24 white enameled wash basins, supplied with hot and cold water, 2 closets and an inclosed shower bath located at one end of the room, and lockers for those desiring to change their soiled working clothes for other attire. The floor is of cement and so laid as to permit daily flushing.

Other betterment features at Redstone are a village garden, in which employees may raise their own vegetables without cost for plowing and irrigation, and a village stable in which a horse or cow may be kept by payment of a small monthly rental.

A hospital and medical department has been organized with a large central institution at Pueblo, known as the Minnequa Hospital (Plate 84), and branches or emergency hospitals at all of the leading camps. These are in charge of skilled physicians and surgeons, whose duty it is to care for sick and injured employees and to exercise general supervision over sanitary conditions at their respective stations. The total number of cases treated at the various hospitals during the year ending June 30, 1903, was 82,821.

The Minnequa Hospital at Pueblo was completed in 1902 at a cost approximating a quarter of a million dollars, and is without doubt one of the handsomest and best equipped institutions of its kind in existence. The entire hospital plant, including grounds and buildings, covers 13 acres and comprises a central or administrative building, three ward and operating buildings, a hospital for communicable

diseases, a physician's residence, a recreation hall for convalescents, a kitchen and a dining room, a laundry, a light and power plant, a well and pumping station, and a stable and ambulance barn. The hospital now accommodates 240 patients, and it is planned to add other wards as they are needed.

J. B. AND J. M. CORNELL COMPANY, COLDSRING, NEW YORK.

The dwellings erected by this company for the housing of their employees were designed by the president of the company, Mr. J. M. Cornell, and, while they were built with economy, in order that the price of rent might put them within the reach of the great mass of the company's employees, much care and thought were given in order to secure the comfort of those for whose use they were built.

Every house has a good cellar in which is installed a furnace. The first floor consists of a hallway, parlor, dining room, and kitchen, the latter containing a range and being supplied with hot and cold water. On the second floor are four large bedrooms, with closets, and a bathroom with exposed plumbing. A well-ventilated attic over these bedrooms insures comfort during the heated season.

A fair idea of the general architectural arrangement of these cottages may be gained by reference to the accompanying illustrations (Plate 85) which represent one of the houses.

These houses are all painted white for the first story, the shingles on the second story and those on the roof being stained in various and harmonious colors, so that each house is different from the others in appearance. The lots upon which they are situated measure about 50 by 80 feet each, and are ornamented with attractive flower beds and hedges in front and by trees planted between the houses. The beauty of the surroundings is much enhanced by the rows of wide-spreading shade trees bordering the highway in front.

The rent asked for the cottages is \$12 and \$15 per month. This price yields the company only about 5 per cent on the investment. They are within easy walking distance of the company's works and are much sought after by the employees.

A tract of land has recently been purchased upon which it is proposed to erect a clubhouse for the men, to be equipped with billiard tables, bowling alleys, and a gymnasium, and to contain a large hall for meetings. This undertaking is expected to result in much good to the workmen in the foundry, by furnishing them the means of healthful recreation and pleasant social intercourse.

It is also proposed to open a cooperative store at which employees may purchase their household supplies at wholesale prices. No store orders would be issued, however, employees being free to trade elsewhere should they so desire. During a portion of the time coal has been sold to them at cost, thus saving them about 50 cents per ton.

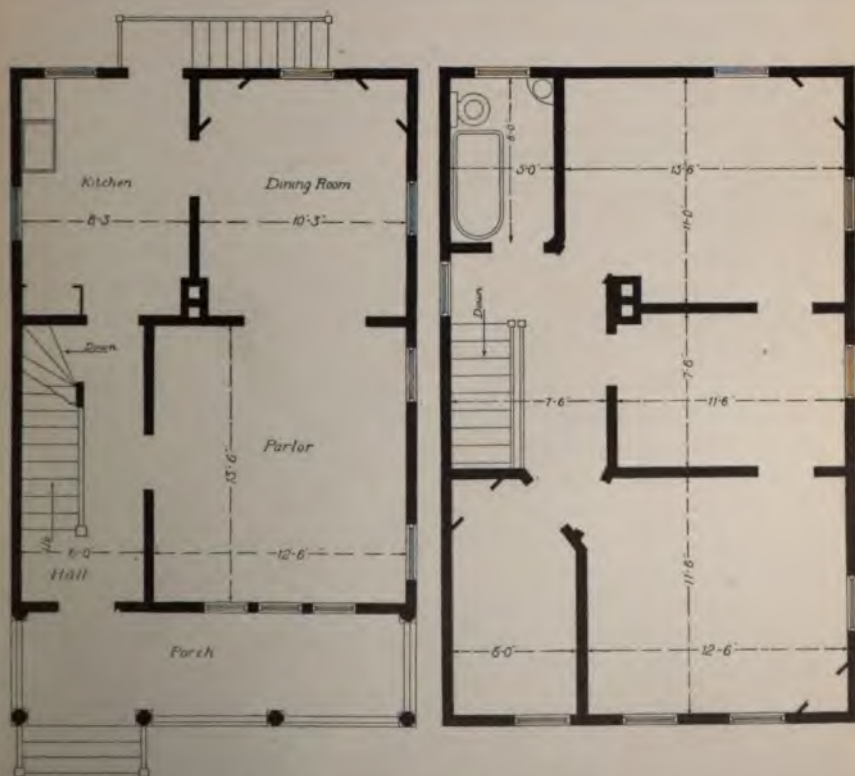


PLATE 85—HOUSE FOR EMPLOYEES, PLAN A.

J. B. & J. M. CORNELL COMPANY



The facilities for the education of the children of employees are of the best, there being in the village a large public school, well conducted, which prepares boys and girls for college. The company, however, has nothing to do with the school.

The providing of dwelling houses for their employees is comparatively a new undertaking for this company. Prior to the removal of their works from their location at Twenty-sixth street and Eleventh avenue, New York City, in 1898, the need of making such provision was not apparent. But with the establishment of the plant at Cold Spring it was found necessary to provide more comfortable homes for the workmen than could be found at the place, especially as practically all available houses had been taken up.

THE DRAPER COMPANY, HOPEDALE, MASSACHUSETTS.

The tract of land upon which are situated the houses built by this company for the use of its employees contains about 30 acres and was laid out by a distinguished landscape artist, who prepared the plans for the entire work before any of the improvements were made. The company next built new macadamized roads, with concrete sidewalks, put in sewer and water pipes, and obtained building plans from several different architects in order to secure variety in the construction of the houses. As will be seen from the photographs (Plates 86 to 88) the buildings are all of wood, the exteriors consisting of shingles painted in various harmonious colors. Their construction is such that while all have about the same amount of room on the inside, their outside appearance is quite different. Each house contains two tenements, each of which comprises a parlor or living room, a dining room, kitchen, and a pantry and hall on the first floor, three sleeping rooms and a bathroom on the second floor, and a good storage room in the attic. A few have a fourth bedroom in the attic. The floors of the lower hall, the dining room, kitchen, pantry, and bathroom are of hard maple, the rest of the house being finished in white wood, either painted or in the natural color. Every house has a good cemented cellar, and many are furnished with gas and electric lights and other modern conveniences. The two sets of drawings reproduced in connection with the photographs serve to illustrate the general style and architectural arrangement of all dwellings erected by the company. The handsome appearance presented by these houses is greatly augmented by the well-kept lawns surrounding them, beds of bright-colored flowers, neatly trimmed hedges and attractive shade trees all contributing to the general effect.

The company sees that all buildings are kept in good repair and insists upon a strict observance of proper sanitary regulations on the part of the occupants. The premises are well drained, vaults are cleaned out, and ashes and garbage removed at stated periods; and particular

care is taken that the yards, both front and back, shall be kept in perfectly clean condition. The photograph entitled "A study in back yards" (Plate 88) gives a fair idea of what is being done along this line. Prizes amounting to \$300 are distributed each year by the company to those tenants whose yards are kept in the best condition. The amounts thus awarded in 1902 were divided as follows: One first prize, \$10; twelve second prizes, \$7.50 each; forty third prizes, \$5 each. These prizes are based upon the general condition of the premises, both in front and in rear of the houses, special attention being given to the care of the grass and consideration to anything else that may have been done. This plan has been in operation eight or ten years and has proved an excellent one, for, in addition to being an incentive to the tenant, it obliges a committee from the company to inspect the premises at frequent intervals, and this in itself leads to the discovery of anything that may need attention.

The rentals of these houses has been fixed by the company at \$3 per week for each tenement not supplied with heating apparatus, or \$3.50 per week for such tenements as have furnaces. As the houses cost in round figures about \$4,500 each, or about \$2,250 for each tenement, exclusive of the land on which they stand, this price yields the company only a small income after deducting water rates, insurance, repairs, and depreciation.

The Draper family, of which four officers of the present company are members, began its manufacturing career in the place about the year 1836. The village owes its name to Rev. Adin Ballou, who founded here, in 1841, a Christian Socialist community which he hoped would justify his ideas and his aspirations, but which, for want of a sufficient financial foundation, was not a success.

The stable population of the town at the present time numbers only about 2,000 persons, while the company, which manufactures all kinds of machinery for cotton mills, has in its employ, at times, as many as 3,000 men. A considerable proportion of these men are skilled mechanics who are restless and much inclined to move away after a time. For this reason few of them care to own homes of their own, preferring to pay the moderate rent charged for the company's houses. Under these conditions the company now owns a large percentage of the dwellings in the place and plans are being prepared for about twenty additional houses to be erected in the near future.

A fine church, of stone, costing some \$60,000, has been erected by George A. and Eben S. Draper, in memory of their parents, while another member of the company, Mr. J. B. Bancroft, has built, as a memorial to his wife, a beautiful public library (Plate 89) at a cost of \$40,000. The school building (Plate 90) and the town hall are also gifts of the company.

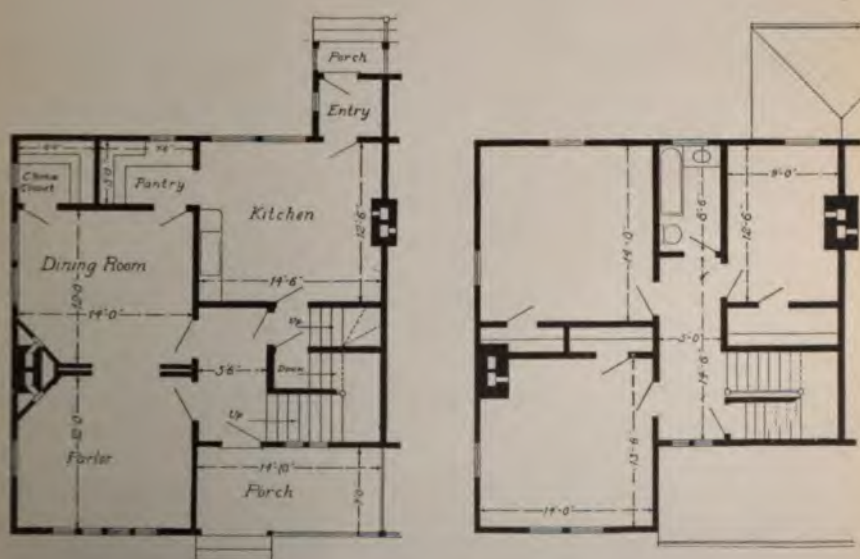


PLATE 86—HOUSE FOR EMPLOYEES, PLAN B

THE DRAPER COMPANY

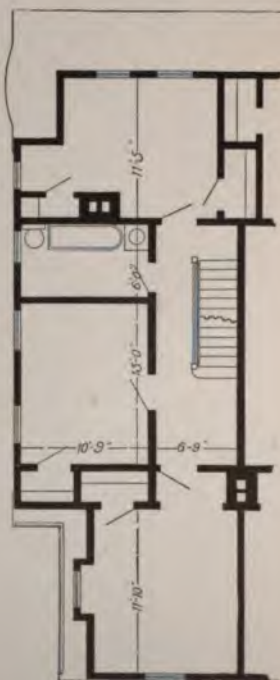
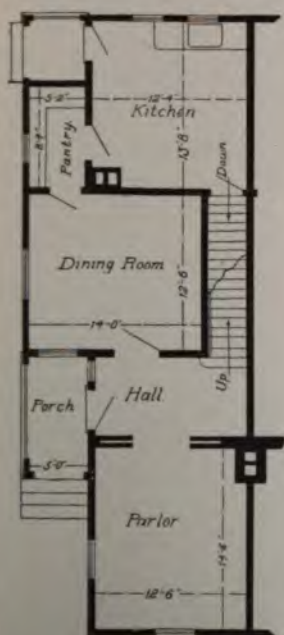


PLATE 87—HOUSE FOR EMPLOYEES, PLAN C

THE DRAPER COMPANY

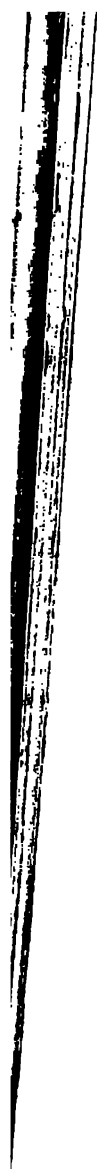




PLATE 88—A STUDY IN BACK YARDS



PLATE 89—BANCROFT MEMORIAL LIBRARY



PLATE 90—GRAMMAR SCHOOL BUILDING

THE DRAPER COMPANY



Mr. Nicholas Paine Gilman, the well-known writer and sociologist, his "Dividend to labor," alludes to Hopedale as "one of the most shaded and best kept manufacturing villages anywhere to be found." "Here is," he asserts, "a large absence of the usual depressing tures, and evidences abound of private taste and the employer's morality."

LUDLOW MANUFACTURING ASSOCIATES, LUDLOW, MASSACHUSETTS.

The history of the social-welfare work of this company is extremely arresting. The property at Ludlow was first developed as a small cotton mill in 1824, and after various changes in ownership was finally reorganized as a hemp and jute mill in 1868. All of the mill buildings in existence at the present time are comparatively modern structures, however, the oldest having been built in 1878. The mill buildings, shops, and engine and boiler rooms contain over 14 acres of floor space, while the warehouses cover 10 acres of ground and are connected with the mills and the railroad by $3\frac{1}{2}$ miles of tracks and sidings, served by two locomotives.

The following account of the efforts of the company for the betterment of the working and living conditions of its employees is taken largely from a statement prepared by its treasurer, Charles W. Hubbard.

Mr. Hubbard states that it has been the aim of the corporation to make the village an attractive place in which to live. Apart from philanthropic motives, the managers believe that by so doing they will be able to attract a superior class of operatives. When the present corporation first purchased the property there were but two streets, containing a church, a single-room schoolhouse, and a few old-fashioned dwellings. During the last thirty years the corporation has built 4 miles of good streets, and has partly constructed, at its own expense, waterworks, gas works, and electric-light plant, lighting the village streets without charge. It has provided and now owns the church, one of the schoolhouses, the Masonic hall, and all except a few of the houses in the village. The original intention was to encourage private ownership of cottages, but after several sales were made this was deemed undesirable, except in the case of small farms outside of the village. While the original purchaser might be satisfactory, the property was liable to pass into undesirable hands, and the enforcing restrictions as to pigpens, hen yards, and other nuisances might be entailed. The cottages sold have been bought back as opportunity offered.

The first houses built were planned by the architects without sufficient regard for the requirements of the people who were to live in them, but of recent years the managers have made a careful study of the problem in order to provide, at the least possible cost, cottages which

will meet all requirements. Each new set of cottages, as built, has been planned to remedy some defect in a previous plan, to incorporate some improvement suggested, or to lessen the cost of construction. The tenants have been asked for criticisms and suggestions, which have been acted upon when approved. Different families have different ideas. Some prefer stairs opening from the kitchen, some from a front hall, some wish the bathroom upstairs, others downstairs, etc.; hence a variety of plans for dwellings of substantially the same size and cost have been followed. In planning these houses the following considerations have been constantly in mind: Economy of room, economy of heating, economy of work in the care of house and children, the largest available amount of sunlight, economy of cost, and simple and well-proportioned outlines.

The earlier experiments made by this company in the building of homes for its working people were regarded as failures. Shortly after the acquisition of its property at Ludlow the company erected a few cottages which seem to have been planned more with reference to outside appearance than to meet the requirements of the occupants. Moreover these houses were found to be too expensive for the class of people they were intended to shelter and in many cases they were not properly cared for by the tenants. The company next constructed a number of large tenement houses—some accommodating as many as eight families—but they proved even more unsatisfactory than the single cottages and the plan was soon abandoned. After a careful study of the matter a second and successful attempt was made to introduce individual houses, these being simply, but conveniently constructed and renting for a comparatively low sum. For several years all houses constructed by the company conformed to this general plan, with the exception of a few two-tenement houses, containing four rooms each, with separate front and rear entrances, which were built for the sake of economy in providing small flats for newly married couples.

With the large increase in population during recent years, however, it was found that the construction of so many single cottages was tending to spread the village over too large an area, and in order to economize space and also to give a choice in the selection of a home, a block of six-room and nine-room houses was built, also 24 suites of rooms, some of them over stores, and some in a separate block, each apartment or house having a bathroom. It is stated that the apartments at the present time seem to be unpopular, apparently because it is the fashion in the village to have a separate cottage, and operatives who have lived in flats in other villages refuse to accept a better one in Ludlow, and demand a cottage.

From the accompanying photographs and floor plans (Plates 91 to 93) which have been furnished by the company as representative of the

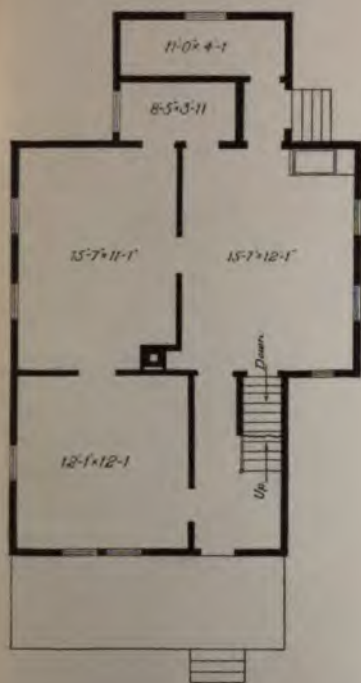


PLATE 91—LUDLOW COTTAGE

LUDLOW MANUFACTURING ASSOCIATES

1777-1778

1779-1780

1781-1782

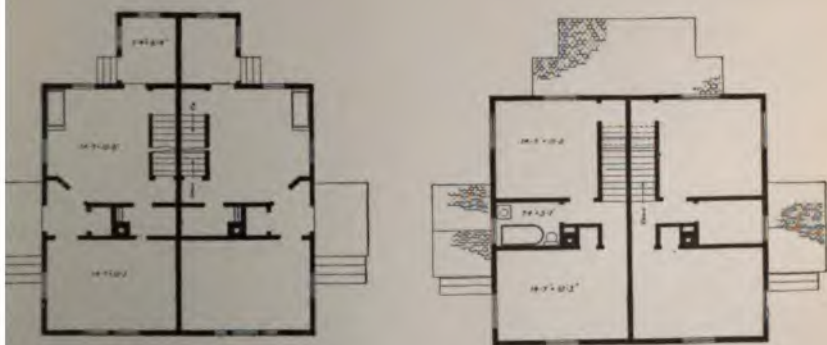


PLATE 92—PLYMOUTH COTTAGE
LUDLOW MANUFACTURING ASSOCIATES





PLATE 93—WESTON COTTAGE
LUDLOW MANUFACTURING ASSOCIATES



dwellings erected for its employees, it will be seen that the houses are neat and substantial structures, of pleasing architectural design and with attractive surroundings. Almost all are two stories in height, well finished, painted within and without, and supplied with running water and other modern conveniences. A cooking range and a sink are found in the kitchen, while a large cellar furnishes a place for storing fuel and provisions. The houses are warm and comfortable, well lighted and ventilated, and convenient in arrangement throughout. The monthly rental, with bath, varies from \$6 for a four-room apartment in a large double house to \$9 for an eight-room cottage. To this must be added a charge of \$1.25 per month for full water privileges, making the total rent \$7.25 and \$10.25, respectively.

From the statement furnished by Mr. Hubbard it is learned that the social-welfare work of the company has by no means been confined to the providing of houses for its employees, but includes other very important features. These are described in the following language:

At first the village contained one ungraded school with a single teacher. A large increase of operatives in 1878 required two additional teachers, whose classes were held temporarily in the church vestry. The Ludlow Company then decided to build and own the schoolhouse. Accordingly, a schoolhouse containing six class rooms, a lecture hall, and school parlor was built and rented to the town at the nominal sum of \$100 a year. The managers had hoped to introduce instruction in cooking and sewing, and that plan was not favored by the town committee. Considerable friction arose between the corporation and the town authorities in regard to the management of the school. Finally the corporation refrained from making any attempt at improvements in the school work, but continued to give the use of the schoolhouse, and until within a few years had paid a quarter of the salaries. Two years ago the growth of the village required additional room, and an eight-room schoolhouse was built by the town. Perfect harmony now exists between the corporation and the town officers, and it is believed that suggestions from the former in regard to the management of the school would be welcomed by the town.

In 1878 the corporation fitted up a few rooms in an old building as a library and reading room, with a small number of carefully selected books. In 1888 a new library was erected as a memorial of the late treasurer by his widow and children. This library building was given to the town under certain restrictions. At the same time the corporation presented to the town all the books belonging to its library, and has since paid for additions of books, as well as all salary and maintenance expenses. The library now contains 7,000 volumes, and 55 magazines are to be found in the reading room. The patronage is fairly satisfactory and is increasing, and the building will probably continue to meet all the requirements of the town.

When the first library was started in 1878 a room fitted with various small games was set apart as a smoking room but the attendance became so disorderly that after several forcible ejections the room was closed. During the succeeding years the general tone of the village

In 1895 the attempt was again made. An unused part of the mill was fitted with bowling alleys, pool tables, and other games. At this time an organization was formed which still continues. This association of the employees, known as the Men's Club, has its board of directors, and many of the heads of departments of the corporation have taken an active interest in its development, thereby giving stability and continuity to the movement. In 1898 the association was crowded out of its quarters, as the space was needed for mill purposes; but on the completion of the building now occupied the whole upper floor was reserved and equipped for permanent social rooms. The association has been actively interested in athletics, and by always insisting upon clean sports and gentlemanly behavior it has been able to exchange games for its teams in a class above that occupied by teams from the neighboring mill towns. During the last year the corporation has leased an athletic field of about six acres, containing a quarter-mile running track, and fields for baseball and football; all fenced by a high board fence. This will be under the control of the Athletic Association. In addition to the social rooms occupied by the association, the corporation has, for the past three years, furnished space for gymnastic and basket-ball work in the mill buildings. The discipline of self-control, and the demand for fair play in all sports has had an influence in every department of town and home life. Men learn to work together by cooperating in team work and in social activity, and success in athletics has fostered a pride in the village which will help work in other lines.

An institute for women, known as the Girls' Institute, has been supported for the past three years. The old office building was remodeled and refitted to meet the needs of a social and industrial girls' club. Parlor, reading room, office, class, and game rooms were suitably furnished. Physical culture has been the most popular and perhaps most useful of its educational features. Notwithstanding hard work in the mills, interest in physical training has been intense among the young women, and apparently with beneficial results. The instruction has been in Swedish gymnastics, somewhat modified to make them popular and creative, and in games, principally basket-ball in winter and tennis in summer. Cooking, sewing, and kindred domestic classes have been carried on with success by the institute. The social features have been dances among the girls themselves, and a reading and entertainment class giving monthly entertainments.

In the spring of 1903 the girls organized as "The Ludlow Girls' Institute Association," and have, through their board of directors, outlined and directed their own work. The nominal fee of 25 cents quarterly is paid by each, and is used to meet the incidental expenses of the organization. This association now has about 75 members, each member being a regular attendant at one or more of the classes.

In order to add to the attractions of the village, in 1892 a hall was built for the local lodge of Masons. The upper story was arranged for the sole use of the lodge, and was fitted up in a manner to meet all their requirements, while the lower floor was arranged for social gatherings of the Masons and other societies or fraternities in the village. This building has proved quite popular, and has added much to the social life of the village.

A savings bank was started in 1888. The corporation furnished a room, free of rent, and paid the salary of the treasurer of the bank.

One or two leading men of the company also acted as trustees, but they were in no other way connected with the bank. After a few years the bank was able to pay all its expenses, and now has deposits of about \$220,000, and occupies a very neat bank office.

The advisability of starting a corporation store has been discussed several times, but no action has been taken until recently, the corporation having started a restaurant, in connection with which they sell bread, pastry, and cooked foods. Believing that the credit system is a curse to manufacturing villages, they have run this store on a cash basis. The result has been that the operatives generally confine their purchases to stores which give them less for their money but allow them credit and deliver at their doors. Unless the operatives realize the saving they can make by paying cash and buying of the corporation store, it is doubtful if it can be continued.

A cooperative store has been suggested by the operatives but has never been favored by any of the leading men in whom the management places confidence, and consequently has never received support or encouragement, and the difficulties of securing cash payments would probably ruin any undertaking of this sort.

The following general remarks, which conclude the statement furnished by this company, are of special interest in connection with the subject of industrial betterment, owing to the earnest, painstaking, and evidently successful efforts which it has made during a period extending over many years:

To those who read accounts of social betterment, it may seem a most simple and easy matter to create a model community. Build attractive houses, establish an institute with a trained social secretary, and they think the rest will follow. How little they realize how much time, work, tact, patience, perseverance, and charity will be required to bring about the desired result. They will encounter racial prejudices, local and personal jealousies. They will have to repress the inefficient would-be leaders and to draw out the efficient but reluctant ones. We often read glowing accounts of social betterment carried on by such and such a concern; shortly afterwards of the establishment being the center of a disastrous strike; later, possibly, that the whole attempt at social betterment has been given up as a failure. Then it is safe to say that it was not conceived in the right spirit nor carried on in the right spirit; that it was either dictated by self-interest or executed in a spirit of condescending patronage. Social betterment, to be successful, must first be free of any suspicion that it is designed to take the place of wages; second, it must not be too paternal, or suggest that the recipient of its benefits does not know how to obtain them himself; third, the ideals aimed at must not be too far removed from actual conditions; fourth, as far as possible, and continually more and more, the people should assume the management.

It may be stated generally that experiments in social betterment have been judged too hastily to have been successes, or to have been much greater successes than they really were. Many have been failures. Of these we rarely hear; and yet failures are often as instructive as successes; and a knowledge of previous failures would save many future ones.

MARYLAND STEEL COMPANY, SPARROW POINT, MARYLAND.

The large and important industrial plant operated by this company is located on the Patapsco River, about 10 miles from Baltimore, and employs between 4,000 and 5,000 workmen. Its erection was begun in 1887, a tract of unimproved land containing about 1,100 acres having been purchased as a suitable location. At the present time the establishment comprises four blast furnaces with a capacity of 300 tons each per day, a Bessemer steel converting mill, a blooming mill, rail and billet mills, and a large coke plant which manufactures fuel for the works from bituminous coal and furnishes illuminating gas to the city of Baltimore. In addition to the various mechanical shops required for the steel works, there is the marine department, in which are built steel vessels of all kinds, from tugboats to the largest ocean steamships, and the dock department, where have recently been constructed for the United States Government two of the largest floating docks in the world.

Aside from its extensive manufacturing operations, the Maryland Steel Company has devoted much attention to the subject of providing comfortable and sanitary houses for the people in its employ. A large tract of land, embracing several hundred acres adjacent to the mill property, has been laid out in streets and building lots, upon which the company has erected about 800 houses for the accommodation of employees. These are neat frame and brick structures, as a rule two stories or more in height and equipped with baths and underground sewerage (Plates 94 to 100). Artesian water of the purest quality is supplied to all the houses. A few of the buildings are of the tenement-house type, but by far the greater part are individual cottages, well finished throughout and painted in attractive colors. The number of rooms varies from five or six in the smaller dwellings to twelve or fifteen in the larger, a few houses containing an even greater number of rooms. As the monthly rental of these houses averages less than \$2 per room, it is seen that the company receives but a moderate return on the money invested, after deducting the necessary expenses for taxes and repairs. About 50 per cent of the men employed in the works occupy homes which are the property of the company, the remainder coming daily by rail and trolley car from Baltimore and intervening points.

It has been the aim of the company to make Sparrow Point noteworthy as an attractive and healthful place of residence for its employees. The broad streets, laid out at right angles and lined with shade trees, are kept in repair by the management, which has also provided electric lights, schoolhouses, a fire department, and police force, as well as a thorough system of public sanitation. The various religious denominations have handsome and commodious houses of

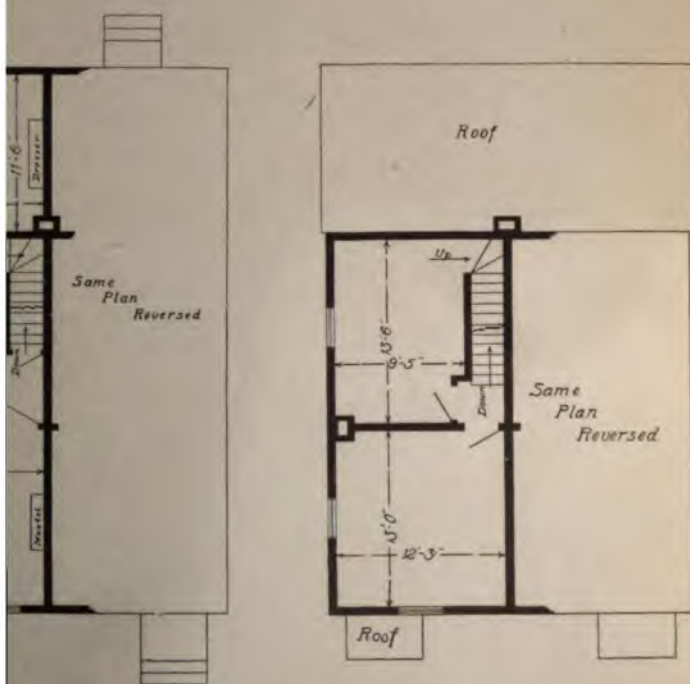


PLATE 94—HOUSE FOR EMPLOYEES, PLAN D

MARYLAND STEEL COMPANY



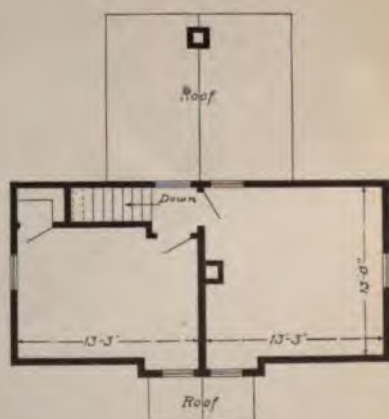


PLATE 95—HOUSE FOR EMPLOYEES, PLAN E

MARYLAND STEEL COMPANY



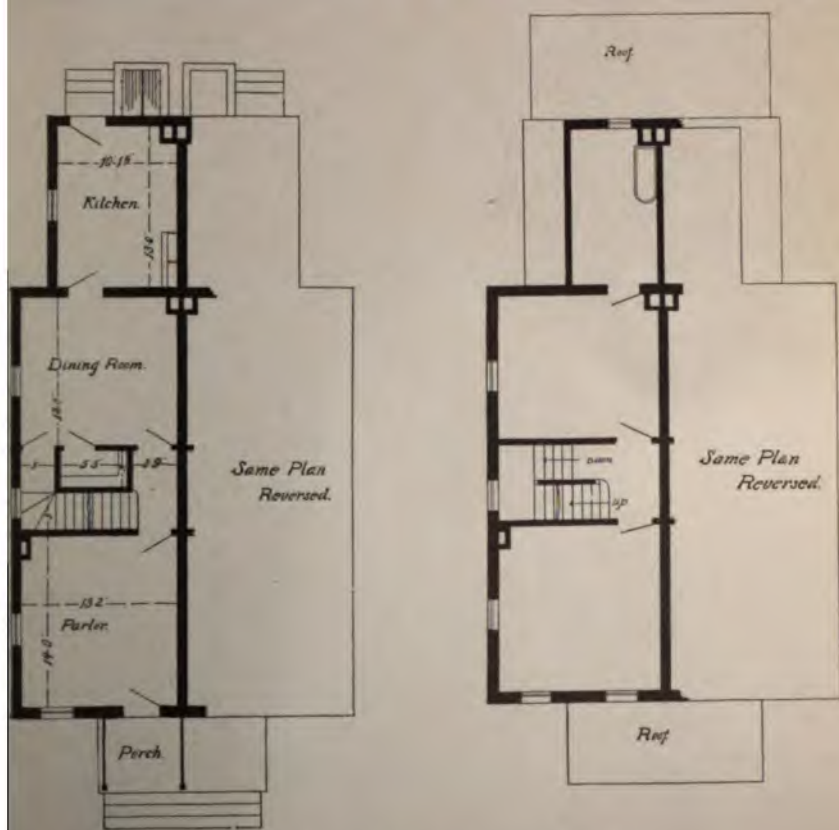


PLATE 96—HOUSE FOR EMPLOYEES, PLAN F
MARYLAND STEEL COMPANY



100

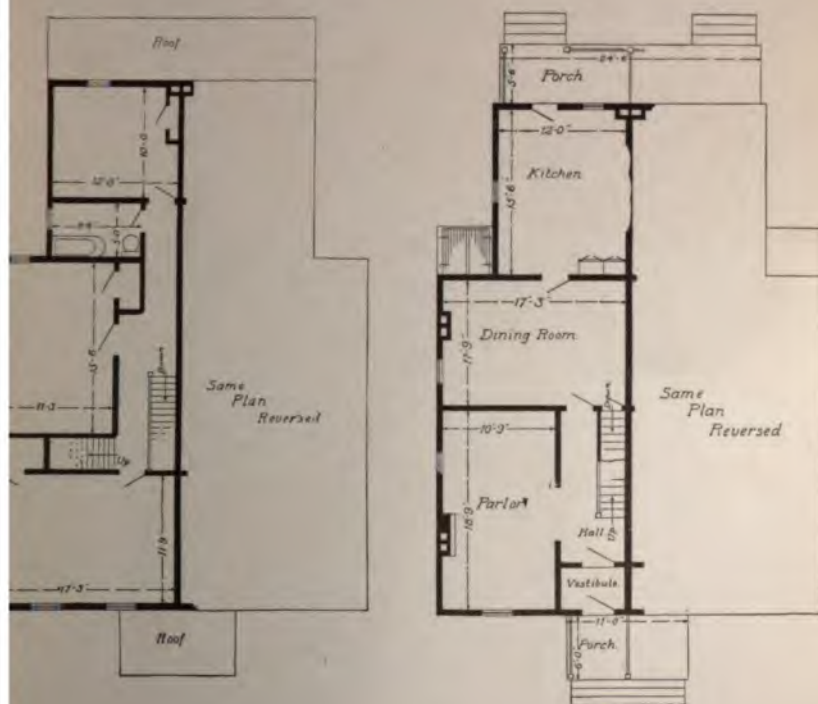


PLATE 97—HOUSE FOR EMPLOYEES, PLAN H

MARYLAND STEEL COMPANY



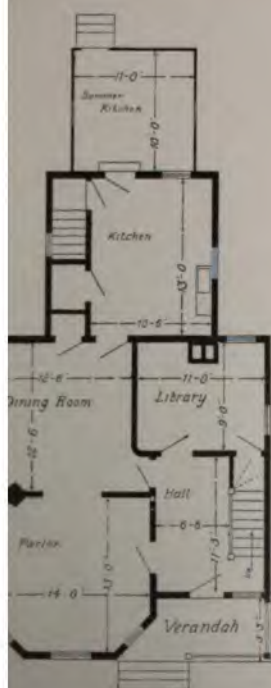


PLATE 98—HOUSE FOR EMPLOYEES, PLAN J

MARYLAND STEEL COMPANY



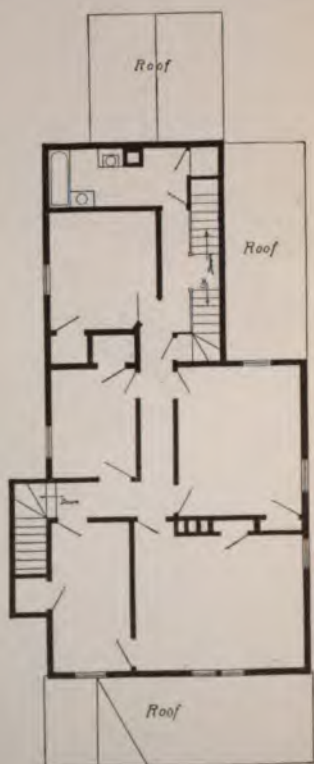


PLATE 99—HOUSE FOR EMPLOYEES, PLAN K
MARYLAND STEEL COMPANY



15



PLATE 100—HOUSE FOR EMPLOYEES, PLAN L

MARYLAND STEEL COMPANY





PLATE 101—KINDERGARTEN BUILDING



PLATE 102—SCHOOL BUILDING

MARYLAND STEEL COMPANY



1874

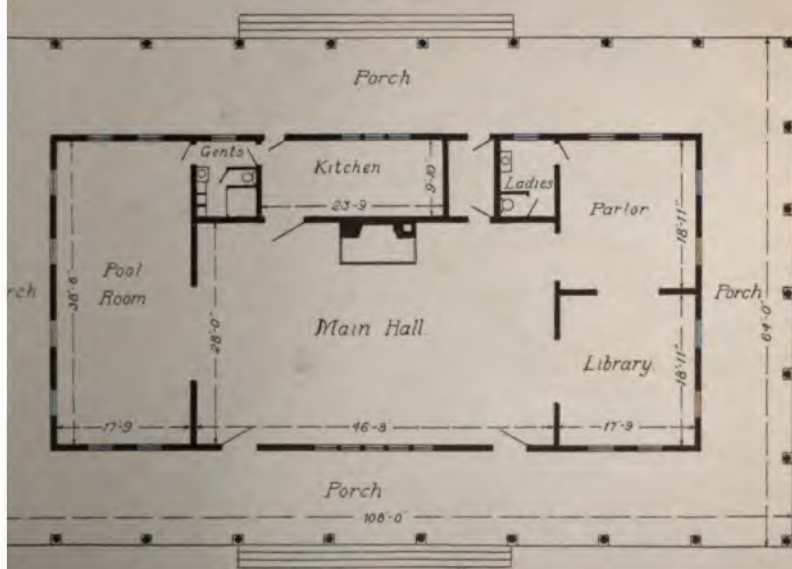


PLATE 103—CLUBHOUSE FOR EMPLOYEES

MARYLAND STEEL COMPANY



worship on lots donated by the company. A free kindergarten (Plate 101) was opened at Sparrow Point in 1892. Another department of the public school system is the manual training school, in which more than 160 boys are learning the rudiments of mechanical work and drawing. There is also a school of domestic science, with sewing and cooking classes for the girls. A spacious clubhouse (Plate 103) costing more than \$5,000 and furnished throughout in tasteful and attractive style, provides a place for social gatherings of the employees. Several acres of woodland along the river front have been retained as a pleasure park, where rest and recreation may be enjoyed after the day's work. The town is entirely free from the demoralizing effect of the saloon, the sale of liquor not being permitted within 2 miles of the public school. The citizens constitute a self-supporting and law-abiding community, in which prosperity and contentment are prevailing characteristics.

N. O. NELSON MANUFACTURING COMPANY, LECLAIRE, ILLINOIS.

A good example of home ownership is that furnished by the village of Leclaire, which was founded in 1890 by N. O. Nelson. The village occupies a tract of land containing 125 acres, adjacent to Edwardsville, Illinois, and about 18 miles northeast of St. Louis, Missouri. Believing that nothing contributes so greatly to the welfare and contentment of the American workingman as the possession of a comfortable home, this company endeavors to provide houses for its employees on terms that put them within the reach of all who desire them. The price charged for land, including improvements, varies from \$2 to \$2.50 per front foot. To this is added 6 per cent interest, dating from 1892. The company builds the houses on plans mutually agreed upon and charges for them the cost of raw material and labor, plus the average profit made by the manufacturing business. As the firm has its own planing mills and wood-working force, the net cost of a house to the purchaser is considerably less than if bought in the usual way. Payments are made monthly, the amounts varying from \$12 to \$20, according to the price of the house, the wages of the buyer, and the size of his family. The attempt is made to provide a house for everyone desiring it and to make the payments such as he can afford. The company states that no difficulty has ever been experienced in keeping up the installments. In the event the purchaser desires to remove and dispose of his property, the company voluntarily refunds the amount paid for the house, after deducting therefrom rent for the time occupied. There is no intention to provide houses for rent, except in a few cases for temporary occupancy. These bring from \$8 to \$12 per month.

The accompanying photographs and floor plans (Plates 105 to 107) illustrate the several different types of dwellings erected by the company. It will be observed that no particular style of architecture is

been adopted but that all the houses are planned to meet the requirements of good taste, economy, and convenience. Electric light, plumbing of the most approved type, and an abundance of pure running water are provided. Household-ers are charged \$5 per year for full water privileges, including sprinkling and irrigation, and 25 cents per month for lights. Nearly all of the houses are built on lots containing one-third of an acre of ground and are placed at a sufficient distance from the street to allow for ample front yards. A large steam-heated greenhouse, maintained by the company, supplies residents with plants and flowers free of charge for beautifying the grounds surrounding their homes. The winding cinder roads, bordered with spreading shade trees, the groups of ornament shrubbery and plants, and the carefully cultivated flower beds in and about the factory grounds and parks give the place an attractiveness rarely to be found in a manufacturing community. Employees may here enjoy the advantages of a city with the freedom and economy of country life. All who wish can keep their own poultry and cow, grow their own vegetables and fruits, and yet live within easy reach of their place of employment.

Although the company spares no effort to render Leclaire an attractive place in which to live, it does not require its employees to reside there. Many have homes in the adjoining town of Edwardsville, where they constitute a most important and progressive element of the population. On the other hand, a considerable number of persons living in the village are not employed by the company, being attracted thither by the numerous advantages offered all residents.

The company supports a school system which has as a fundamental principle the union of industrial training with education from books. This begins with a kindergarten, in which the children are taught among other things the cultivation of vegetables and flowers. Later a regular school course, supplemented by manual training, is introduced. The plan provides that boys 12 years of age shall be given light work for one hour each day in the factories or on the company's farm, for which service they receive adequate remuneration. As they grow older their hours of labor are increased and the time devoted to study correspondingly curtailed until the age of 18 is reached, when they are graduated from school and employed at full time and wages in the works of the company. The only exception to this plan has been adopted of admitting to the school a considerable number of boys about 16 years of age, who perform manual work for the fraction of teachers during half the day and devote the remainder time to study. These boys are charged nothing for tuition and are boarded at the company's expense. Boys and girls whose homes are in Leclaire or Edwardsville may attend the school without the payment of tuition fees. The school fund is endowed with \$10,000 of the stock of the company, and every effort is made to



PLATE 104—SCHOOL AND LIBRARY BUILDING



PLATE 105—HOUSE OWNED BY EMPLOYEE
N. O. NELSON MANUFACTURING COMPANY



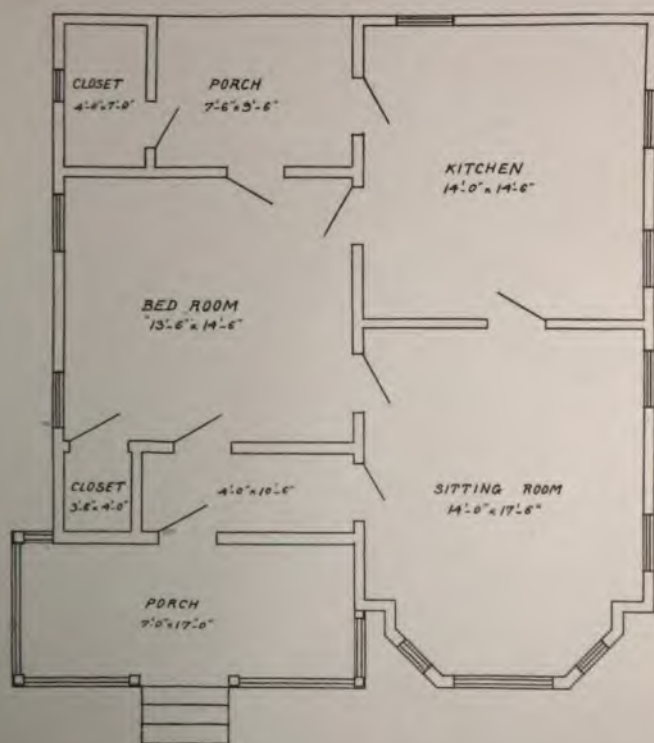


PLATE 106—HOUSE FOR EMPLOYEES, PLAN N

N. O. NELSON MANUFACTURING COMPANY



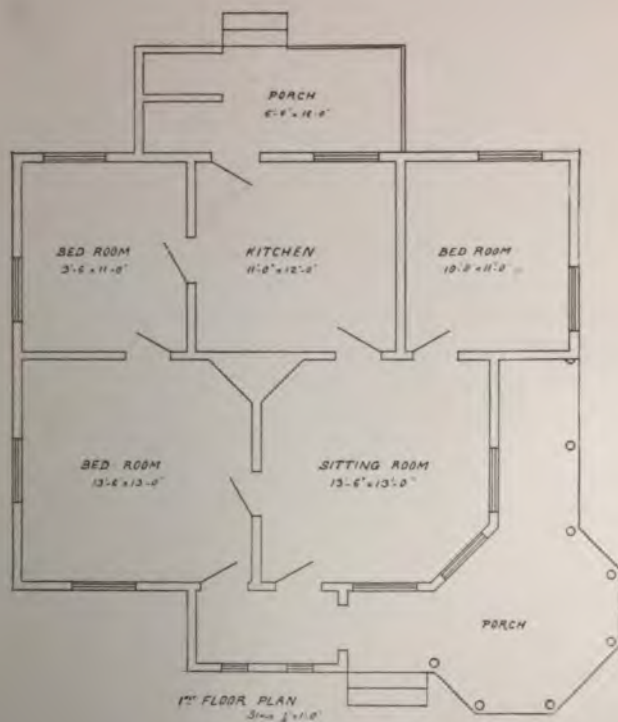


PLATE 107—HOUSE OWNED BY EMPLOYEE
N. O. NELSON MANUFACTURING COMPANY

1. The first part of the document is a list of names and addresses of the members of the committee.

2. The second part of the document is a list of names and addresses of the members of the committee.

3. The third part of the document is a list of names and addresses of the members of the committee.

4. The fourth part of the document is a list of names and addresses of the members of the committee.

provide training that will fit the pupil for the active prosecution of his chosen trade. The school building measures 40 by 50 feet and contains 4 large rooms and a hall (Plate 104). The rooms are separated by sliding partitions so that two or more can be thrown into a single hall for public gatherings, lectures, and other forms of entertainment. The building also houses an excellent public library of about 1,400 volumes, to which additions are constantly being made. The affairs of the school and of the library are looked after by the Leclaire School and Library Association, formed in 1894 and composed of the home-owning residents of the village.

A building formerly occupied by a club of unmarried men as a cooperative boarding establishment, and equipped with electric lights, steam heat, and other modern conveniences, has been converted into a clubhouse for meetings and other social purposes. There is also a billiard room and bowling alley, to which employees have free access. Illustrated lectures on popular subjects, concerts, and other forms of literary and social entertainment are provided at stated periods during the winter months by a literary society composed of operatives. The employees have also a well-trained band of 30 members, uniformed and otherwise aided by the company, which furnishes music on special occasions. A baseball park and a skating pond are included among the other attractions.

A profit-sharing system was adopted by the company in 1886, in pursuance of which interest was allowed on its capital at the usual commercial rate and the remaining profits were evenly divided between capital and labor, after setting aside $2\frac{1}{2}$ per cent for educational purposes and 5 per cent for a provident fund. Interest was regarded as the proper wages of capital; the educational fund was for the purpose of providing a free library, while the provident fund was to be used in caring for the families of deceased employees and for such as were incapacitated for work by reason of sickness or accident. Under this plan dividends of 8 and 10 per cent were paid for a number of years. These amounts were paid in cash or in the company's stock, according to the wish of the employee, until 1890, when the rule was adopted of issuing stock for all dividends to employees. These shares were, however, redeemed at par whenever the holder for any reason desired to leave the service of the company.

In 1894 the rules were altered so that profit-sharing dividends were allowed to only such employees as saved 10 per cent of their wages when working full time and receiving full pay and invested this amount in the company's stock. The purpose of this requirement was "to offer a substantial inducement for men when in good health and having steady employment to save something for the future, and also to make the sharing in the business profits dependent on each one doing something toward it in a direct and personal way." The plan was also

further modified by increasing the dividend paid on wages to 2 per cent as against 1 per cent on capital, and by charging the expenditures for beneficial and educational purposes directly to the expense account of the company instead of providing for them by means of a specific fund. The company states that, owing to dull times and the considerable outlays for social and industrial betterment at Leclaire, no dividends have been paid for the last six years, but that the plan has not been abandoned and that much is expected from it in the future.

As a proof that the policy adopted by this company in dealing with its employees has resulted in entire satisfaction to both parties, it is said that the affairs of the company are in a most prosperous condition, and that the employees are contented and happy, labor difficulties and disturbances being practically unknown.

NIAGARA DEVELOPMENT COMPANY, NIAGARA FALLS, NEW YORK.

Twelve photographs in the exhibit represent views of different parts of Echota, the industrial village recently created by the Niagara Development Company, at Niagara Falls, New York. Although some of these views were taken several years ago, since which time the number of dwellings in the place has about doubled, they convey a fair idea of the general style of architecture adopted by the company in the construction of its houses (Plates 108 to 112). These houses vary greatly in size and general interior arrangement, some being individual cottages, containing from five to eight rooms each, with bath and cellar, and generally heated by furnace; others being in the nature of double and three-tenement houses, the former having six rooms, with bath, furnace, and cellar, and the latter having five rooms without bath; while still others are designed to accommodate four families. Separate front and rear entrances are provided in all double and three-tenement houses, and all houses are furnished with electric lights, water, and other modern conveniences.

The lots are generally about 115 feet deep, affording ample room for yards and lawns. All houses are placed 20 feet back from the street line, the intervening space being covered with flowers and grass.

The streets are usually 50 feet in width, with a macadamized roadway of 25 feet in the center and rows of shade trees on either side.

Practically all of the dwellings, about 100 in number, are occupied by officers and employees of the Niagara Falls Power Company and of the industries located on its lands and using the power generated by it. The architecture of these houses combines a general uniformity of design with a pleasing variety in form and detail. All are painted in the colors adopted by the company (yellow and white) and present a very attractive appearance. The rentals charged by this company range, according to the size and construction of the houses, from \$9 to

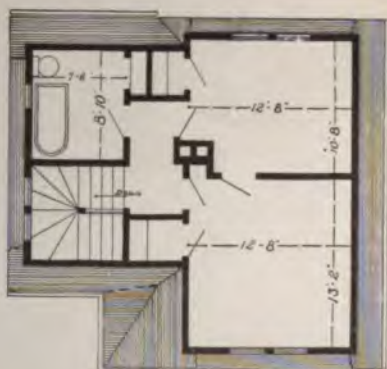


PLATE 108—HOUSE FOR EMPLOYEES, PLAN P

NIAGARA DEVELOPMENT COMPANY



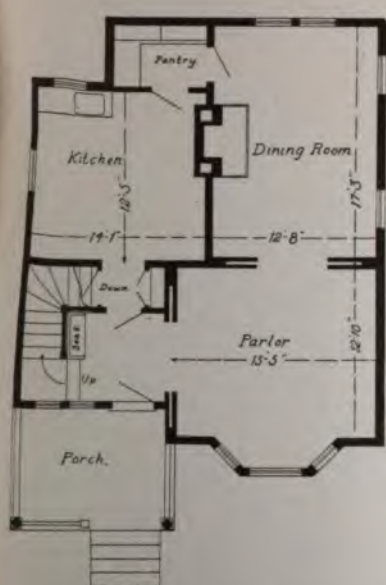


PLATE 109—HOUSE FOR EMPLOYEES, PLAN Q

NIAGARA DEVELOPMENT COMPANY

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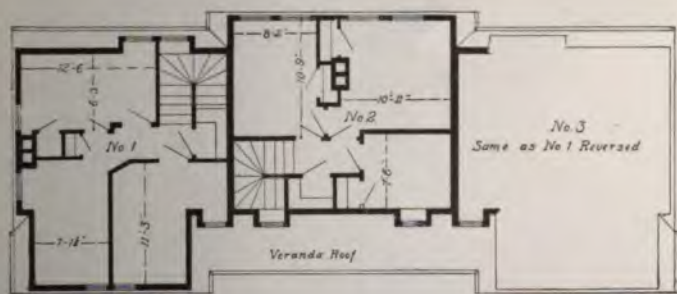
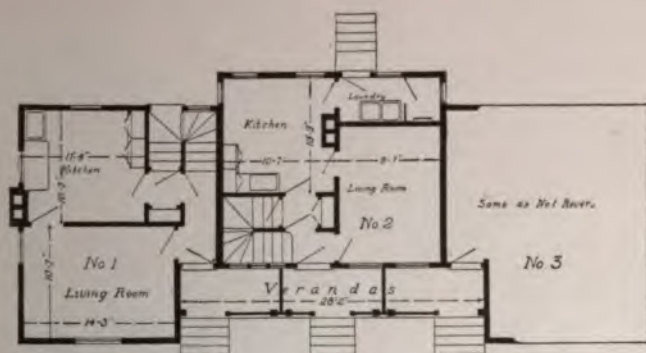


PLATE 110—HOUSE FOR EMPLOYEES, PLAN R

NIAGARA DEVELOPMENT COMPANY



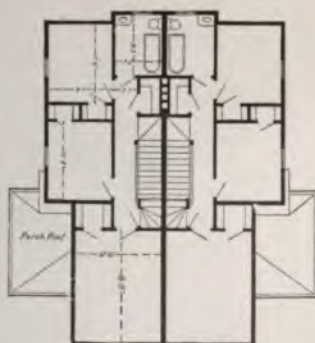


PLATE 111—HOUSE FOR EMPLOYEES, PLAN S

NIAGARA DEVELOPMENT COMPANY



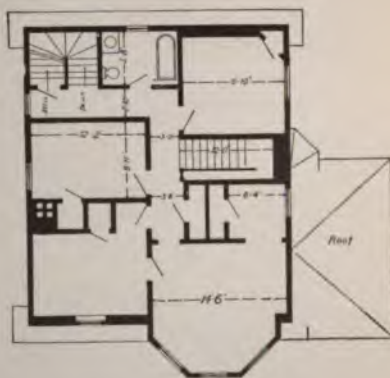
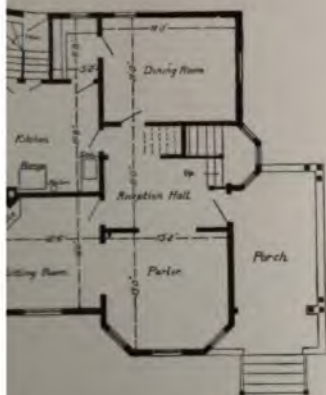


PLATE 112—HOUSE FOR EMPLOYEES, PLAN T

NIAGARA DEVELOPMENT COMPANY

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\$12 for tenements in houses of two, three, and four tenements, and from \$16.50 to \$28 for houses accommodating but one family. These rentals include in all cases water, electric lights, and the care of streets and lawns.

A large building on one of the principal thoroughfares of the village contains a general store on the lower floor, while the upper story has been handsomely fitted up as a public hall, which has been placed at the service of the residents of the village.

A large brick school building has been erected in the village by the city of Niagara Falls, and the company has built an attractive railway station on the line of the New York Central and Hudson River Railroad. The company has also erected a large plant for the disposal of the village sewage. A description of the excellent drainage and sewerage system of the village may be of interest in this connection by reason of the peculiar physical conditions encountered in its construction. The following facts relating to this difficult undertaking have been taken from an article written by Mr. John Bogart, one of the consulting engineers for the Cataract Construction Company, and published in *Cassier's Magazine* for July, 1895:

The tract of land upon which the village is located contains about 84 acres and is of oblong shape, being about 3,000 feet long in a direction parallel with the Niagara River and about 1,500 feet in width. The whole area of the village, as well as that of the land between it and the river, distant about 1,000 feet at its nearest point, is very flat and slopes very slightly to the river bank. An extreme surface variation of only 4 feet was noted over the whole 84 acres of meadow land upon which the village now stands. The average level of the river is about 3 feet lower than the lower parts of the village, but the water of the river occasionally rises to very near this elevation. It was therefore impracticable to carry the drainage of these grounds to the river with sufficient fall in pipes or gutters to quickly relieve the surface from the water of rainfalls, while to conduct the requisite sub-drainage directly to the river was simply impossible. The character of the soil which consists of a few inches of surface loam overlying a stratum of hard, tenacious clay, with rock foundation, rendered the ground heavy and sticky during wet weather and dry and dusty at other times. These conditions had to be removed in order to provide for the smooth roads, grassy lawns, trees, and flower gardens contemplated in the plans. Moreover, with the coming of the colonists, ground in such condition would have proved a fertile field for the spread of malaria and kindred diseases. It was necessary also to provide an outlet for the sewage of the houses. As with the drainage a direct discharge into the river was rendered impracticable by reason of the latter's elevation. Under these circumstances a scheme was evolved by the company that has proven an entire success. The principal pipes of the drainage system follow the streets; those to convey sewage are in the alleys. The latter are at a higher elevation than the drain tiles, thus permitting house connections for sewage without disturbing the drainage system. The drain tiles are 2 inches in diameter,

being laid about 40 feet apart and from 4 to 6 feet below the surface. They have open joints, no mortar or cement being used, but around the joints is wrapped a double thickness of cheese cloth. The 2-inch tiles deliver into lines of 3-inch tiles laid in the same way and placed generally in the streets under the grass surfaces, but so disposed as to draw the water fully from the ground under and on both sides of the paved parts. The 3-inch tiles lead at frequent intervals to receiving basins in the center of the streets, from which the effluent is conducted by lines of vitrified pipes to a large masonry well located at the sewage disposal works. From the well the drainage water is pumped directly into the outlet chamber of the disposal plant, whence it passes into a small stream flowing into the Niagara River. The whole village is underlaid by this drainage system, which has completely changed the physical and sanitary conditions of the ground, it being no longer heavy and muddy after rains or dry and dusty during the warm season. The level of the ground water has been lowered fully 4 feet, which is, virtually, and for all horticultural and sanitary purposes, precisely as though the whole surface had been lifted 4 feet.

The sewerage system is entirely separate and takes no storm or drainage water. The pipes, whose minimum diameter is 6 inches, have cemented joints and are flushed automatically at regular periods. Through them the sewage is conducted to a compartment of the well already mentioned, whence it is pumped into an elongated tank or disposition chamber so arranged as to insure a very slow passage of the fluid. Here it is treated automatically, by the action of float valves, with milk of lime and a solution of perchloride of iron. Sedimentation and precipitation of the solids follow, floating substances being intercepted by screens. Chlorine is delivered through perforated pipes near the bottom of the tank. When a certain quantity of the purified fluid has passed over a weir into a terminal tank, it flows, by siphonage, into the effluent chamber, from which, with the drainage water, it enters the stream. A second set of chambers is provided so that, while one set is in use, the deposited material in the other may be removed by a system of traveling buckets for use upon the cultivated grounds of the company. The building which shelters the well, the pumps, and the deposition chambers also contains the dynamo for the electric-light service of the village.

Recently the city of Niagara Falls has extended its tunnel trunk sewer to a point in Echota, and arrangements are now being made to connect the sewerage and drainage system of this district with this trunk sewer, which will obviate the further necessity of pumping and treating the sewage of the village. This tunnel sewer discharges at the lower river level below the falls.

Mr. Bogart states in his article that—

It is the intention of the company, as soon as the character of the settlement is firmly established, to give its tenants an opportunity to purchase their homes on easy terms, thus avoiding the evils which have at times resulted from the too positive application of the proprietary system.

PEACEDALE MANUFACTURING COMPANY, PEACEDALE, RHODE ISLAND.

The Peacedale Manufacturing Company is one of the oldest manufacturing institutions in the United States, having been founded in 1801 and incorporated in 1848. Shortly after the date of its incorporation the company began its first specific efforts in the way of the betterment of conditions among its employees. The exhibit, so far as it relates to this company, consists of photographs of a number of the houses built by the company for rental to its employees (Plate 113) and also photographs of houses owned by employees (Plate 114), and of the Hazard Memorial Hall (Plate 115) in which most of the village societies are housed. The company tenements are plain, well-built, comfortable houses, and though not especially modern in design, are always kept in excellent repair.

Among the houses illustrated one very attractive cottage of 8 rooms, surrounded by trees and shrubbery, rents for \$8.33 per month. Another eight-room cottage in a very desirable location rents for \$12.50 per month. Cottages of 7 rooms rent for sums ranging from \$7.50 to \$10 per month. Another class of houses contains two and three tenements of varying sizes. The tenements in the two-tenement houses contain from 6 to 11 rooms each, and rent for from \$1.42 to \$11 per month according to location, etc., while the tenements in the three-tenement houses contain from 3 to 8 rooms each and rent for from \$3.45 to \$6.92 per month. A number of very attractive homes have also been built by employees of the company.

The following excellent account of the various societies and organizations instituted among the employees and other features contributing to their social betterment has been furnished by Mr. William C. Greene, the treasurer of the company:

The village organizations of Peacedale are not generally in the hands of the manufacturing company as such, but have been in most cases started and to a great extent carried along by the owners of that property. The fact that the stockholders of the corporation have always lived here and been a part of the village life itself has proved a valuable item in the growth of the place. As early as 1851 the village children were taught singing on a week-day afternoon, and gathered into Sunday school on Sunday by one of the mill owners and his wife. In 1856 a building was put up with accommodation for the library founded some two years earlier, a reading room, and a hall in which a church was organized. These rooms were used until 1872, when the church was built, and till 1891, when the library was moved to its present quarters. Most of the organizations named below are thus village rather than company matters, but at the same time the company, its owners, and employees practically make up the village.

The Hazard Memorial at present harbors most of these organizations. The building was erected in 1891 to the memory of Rowland Gibson Hazard. It contains a library, which now holds about 10,000 volumes, a hall seating 600 people, several class rooms, a gymnasium,

etc. The building, of stone and wood, is an important part of the village architecture, and was deeded by the sons of Mr. Hazard to trustees to hold in perpetuity for the use of the whole community. The hall is not let to any traveling show or organization and for no entertainments that are not considered by the trustees to be for the better interests of the village. The rental to such people as can hire it is nominal. It is used for fairs, concerts that are gotten up for special town purposes, etc. Its cost was between \$40,000 and \$50,000.

The library is carried on in the interests of the whole town and is managed by a board of directors that represent the different villages. It is used principally by Peacedale and Wakefield, and in the summer is drawn upon by Narragansett Pier and other near-by summer resorts. It is entirely free. It has not only the library proper, but a reading room, which is open during the season until 8 o'clock every night. The library has funds that have been given to it from time to time, and is supported by them and contributions from various interested people. The town has once or twice made an appropriation to buy books, and the State contributes an annual sum for the same purpose.

The choral society was organized some fifteen years ago, and has grown to be one of the leading features of Peacedale. A conductor, Dr. Jules Jordan, comes down from Providence once a week during the season, and there is a chorus of 75 to 100 voices who make up the membership of the society. They give three concerts each year, and have done some fine music, as "The Creation," "The Messiah," "The Elijah," Rossini's "Stabat Mater," Sullivan's "Golden Legend," and about 100 other works. This choral society has not only helped the village in itself, by giving concerts and affording the singers of the place an opportunity, but it has an indirect value in developing the local musical talent, as shown in an excellent church choir, and especially in another feature of Peacedale which we will call the "Sunday musics." The choral society is formally organized, has a president, treasurer, board of directors, etc., and the members pay \$3 each per annum. There is an admission fee to the concerts, but the whole sum realized from these sources is not sufficient to carry on the work, and the deficiency is made up by the owners of the mill property.

A few years ago the "Sunday musics" were begun by Miss Hazard and her sister, who simply went into the hall on a Sunday afternoon and played and sang for fifteen or twenty minutes, while a few people from the outside straggled in. From that it has grown to be an informal concert each Sunday afternoon for the season, from Christmas until Easter. The several Sundays during the time are allotted to musical people in the village and town, and each one gets up a programme that will take from half an hour to an hour. The music is not wholly sacred. The concerts are attractive to the people of the village and town, who come in large numbers, and the hall very frequently contains from two hundred and fifty to five or six hundred people on a pleasant Sunday afternoon. The musicians are almost entirely local, though once in a while we have some first-class performer from the outside. There is no formal organization, and no charge of any sort connected with this work.

The boys' room was started about eight years ago, and is simply arranged. The membership is confined to boys under 16, and made up almost wholly of sons of mill men. The club numbers from 50 to 100. They come to the Memorial building at 7 o'clock each Friday evening,



PLATE 113—HOUSES FOR EMPLOYEES
PEACEDALE MANUFACTURING COMPANY

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PLATE 114—HOUSES OWNED BY EMPLOYEES



PLATE 115—HAZARD MEMORIAL BUILDING
PEACEDALE MANUFACTURING COMPANY

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and are first given military drill, and then amused with table games like checkers, etc., and also have a chance at light gymnastics and shooting with a rifle. They go home at half past 8. There is no charge of any sort in connection with this organization.

In the basement of the Memorial building there is the gymnasium used by the boys' club as above, several bath and dressing rooms, and a room utilized by the young men as a smoking and reading room. For the privileges of the gymnasium, baths, and reading rooms, etc., the members each pay \$2.50 per annum. There are a few magazines and papers taken regularly for this club and others supplied from the library upstairs. The work is under the charge of the superintendent of the building, who maintains order, collects dues, etc.

The village supports a literary society which meets every two weeks during the season extending from October to May. It is regularly organized with a president, secretary, treasurer, etc., and was begun a good many years ago. The entertainments are not wholly of a literary character. They are largely contributed by local talent, and consist of lectures, concerts, dramatic performances, light operas, etc. Lecturers are frequently hired from outside, and one concert of the choral society is included as a regular number in the literary society's course. One night a year is given up to the issuing of a number of the South County Magazine, so called, which is rather a unique production. Though called a magazine, it is in manuscript, and read to the meeting and illustrated by living pictures, tableaux, drawings, etc. The membership consists of all those who buy season tickets, and the charges amount to about 15 cents per night.

In the Memorial building several local circles of the King's Daughters society, which are branches of the regular organization of that name, hold their meetings. About 150 women and girls belong to these circles, and sewing, both making and mending garments, knitting, etc., is done. One circle owns a sick-room outfit, bedside table, rolling chair, and other articles of use in sickness, which are loaned as occasion requires, and these circles look after the needy and suffering, if any there may be, in the village.

There is also maintained in the village what is called the "Neighborhood Guild." This conducts, under the care of a competent teacher, several classes each day in sewing, cooking, home nursing, etc. A nominal fee is charged for instruction in each of these branches, and the work is proving very successful.

A class in carpentry is also taught once a week by a competent man, and for this service also a nominal fee is asked.

These several societies afford an opportunity for much useful and pleasant work. They tie the village together, and tend to raise the general level of the place, and on the whole appear worth while in the minds of those who have given this work their time and attention for many years past. The owners of the property feel that the efforts which they have made, extending now over a long series of years, have aided in bringing about a cordial feeling among all parties who work for the company, and in raising the general morale of the village. Certainly Peacedale has a body of very efficient and steady help, and the changes among the employees are few. A number of families have been here for several generations, and the company has never experienced any serious labor difficulties.

PEIZER MANUFACTURING COMPANY, PEIZER, SOUTH CAROLINA.

The four mills operated by this company, with 110,000 spindles and a full complement of looms, constitute one of the largest cotton manufacturing plants in the South. The number of employees approximates 2,800, all of whom reside in houses which are the property of the mill corporation. These cottages, of which there are about 1,000 in the place, contain an average of four rooms each (Plate 116). The main rooms are usually 16 feet square, while the back or shed rooms measure about 11 by 16 feet. The yards are ornamented with flowers and shrubs and each house is provided with a plat of ground sufficiently large for gardening purposes. Tenants are required to keep their premises in good, clean condition, and prizes are offered by the company for the most attractive looking cottages and yards.

Water is supplied to employees free of charge and a large tract of meadow land is set apart for the pasturing of cows. All sanitary and street work is paid for by the company, which spares no effort to render life in the village pleasant and attractive to its inhabitants.

The rental of the houses has been fixed at the remarkably low price of 50 cents per room per month, or \$2 for an ordinary cottage. This rate, it is stated, is barely sufficient to pay taxes and repairs and yields the company no return whatever on the money invested. While it is true that these dwellings are far inferior in construction to those of a representative industrial community in the North, at the same time it is claimed that they are amply sufficient to meet the requirements of those who occupy them, the mild climate and somewhat primitive methods of life prevailing in this section rendering more elaborate housing facilities unnecessary.

The town of Peizer, in which the factories are located, contains a population of about 6,000 persons, all of whom are more or less dependent for their livelihood upon the mills. The town is not incorporated, but is held as private property by the mill corporation, which owns every house and every foot of land in the place. No home ownership is allowed, the policy of the company being one of absolute industrial control, coupled with a large regard for the general welfare of its employees. There are five churches in the place, neat and commodious in construction, which are well attended by the operatives. In the matter of providing educational facilities for its employees the company has taken an advanced position. Two well-equipped schools, with kindergarten and departments annexed, are maintained (Plate 117). These are open ten months in the year and are absolutely free to all residents of the place. There are also night classes for those whose work prevents their attending the day sessions. As a condition of obtaining employment in the mills, parents are required

to sign an agreement in which this clause is inserted: "I do agree that all children, members of my family, between the ages of 5 and 12 years, shall enter the school maintained by said company at Pelzer, and shall attend every school day during the school session, unless prevented by sickness or other unavoidable causes." In addition to this each child who attends school a month without absence receives a prize of 10 cents. About \$50 a month is thus expended. When it is remembered that there is no compulsory school law in South Carolina, and that the length of the public school term is not more than four months per year, the comparative educational advantages offered at Pelzer appear very great. As an evidence of the great good being accomplished by these schools, it may be said that when they were first started probably 75 per cent of the adult population of the place could not read or write. Now this percentage has been reduced to 15 or 20, and the illiterates are chiefly newcomers from the rural districts near by. About \$5,000 is expended annually by the company in the maintenance of the schools.

The corporation has also established a circulating library containing 6,000 volumes of approved standard literature. This library is installed in a building known as "The Lyceum," which is fitted up in a very tasteful and attractive manner. The main apartment of the building has been set aside as a reading room for women and in addition to the books contains about twenty-five of the leading newspapers and periodicals. Another room is reserved for the use of men, while a third room is furnished with tables and other facilities for carrying on social games. The library is open every evening from 6 o'clock until half past 10 and all day on Sunday. No charge whatever is made for its use. The company also provides a course of free lectures on history and travel, accompanied by stereopticon illustrations, which has proved of great educational value. Athletics and outdoor sports are given special encouragement. The employees have organized several baseball teams which have been uniformed and otherwise aided by the company. A fine bicycle race track is kept up, upon which the members of the Smyth Wheel Club give exhibitions of fancy riding and compete for prizes offered by the company. The Smyth Rifles, also named in honor of the president of the corporation, possess the distinction of being the only military organization in any of the South Carolina mills. This company is composed entirely of young men operatives and is a part of the regular State militia. There is also a brass band fully equipped with fine instruments and numbering 36 members which constitutes the band of the regiment to which the company belongs. These organizations participate in the annual encampment of the State forces and are assisted by the corporation in all necessary ways.

A savings bank is conducted by officers of the company, in which employees are encouraged to deposit their surplus earnings, receiving interest thereon at the rate of 1 per cent per quarter.

There are no company stores at Pelzer. Beyond owning the buildings occupied by the several mercantile firms doing business in the place, the mill management has no connection whatever with them. The largest of these concerns is a stock company, with a paid-up capital of \$25,000, whose shares, of the value of \$25 each, are nearly all owned by the factory operatives, who elect a manager to conduct the business. This establishment is in a most prosperous condition, and substantial dividends are paid to shareholders at regular periods.

In thus making provision for the well-being and happiness of their employees, the officers of the Pelzer Manufacturing Company believe that they are putting their capital where it will yield them the very best returns possible, at the same time fulfilling the duty incumbent upon them as employers to assist their working people to better things by supplying them with such means for the betterment of their condition as they could not otherwise enjoy. As a result of this policy the most friendly relations exist between the company and its employees, no labor difficulties having occurred in the factory since its establishment in 1881.

PLYMOUTH CORDAGE COMPANY, NORTH PLYMOUTH, MASSACHUSETTS.

An extremely interesting and complete account of the work of this company along the lines of general betterment is available through the courtesy of Mr. G. F. Holmes, its treasurer, who has also contributed largely to the interest of the exhibit of the Bureau of Labor by furnishing a number of excellent photographs illustrating the housing and other betterment work of the company.

The Plymouth Cordage Company is situated at North Plymouth, about 2 miles from the old historic town of Plymouth, and has many natural advantages for the development of industrial betterment. Mr. Holmes states that—

The officers of the company saw these advantages several years ago and determined to start upon a plan for the development of the surroundings. Not only did they consider the development of the property, but also the development of those who were employed by them, who were giving them most of their time in the mill and were unable to partake of the slight advantages that then existed for the development of their physical and mental activity. There was a decided lack of social life here, there being nothing to create interest outside of the mill life, which is necessarily narrowing. It was our desire to change these conditions of our employees, to educate them, to teach the boys and girls to help themselves, to direct them, through a library, to the higher education, to show them how to better their surroundings and appreciate them. As many of the employees are foreigners it is our

desire to educate them in American ways of doing things, with the hope of making them better citizens and bettering their condition at the same time.

Beginning with the development of these ideas, naturally the first place that we looked into and changed was the mill where the employees spent most of their time. In the construction of a new mill which was at that time in process of building, their surroundings, comfort, and health were carefully considered. The best sanitary appliances were put in and all toilet rooms were finished with asphalt floors; the side walls were lined with white enamel brick, all plumbing being exposed, which gave us a toilet room that was easily kept clean. With good sanitary conditions the next point was that of fresh air. A modern system of ventilation was installed. Through this system the air is taken from outdoors by large fans, and, in winter, is forced over coils of steam piping. After becoming heated the air is forced through ducts to the different floors above. The windows are dropped at the top and the bad air has a chance to get out, thus making a complete system of ventilation. During the summer months the air is taken from outdoors by the same system, but of course it does not pass over steam pipes. The mill thus ventilated in summer is from 3° to 4° cooler than our No. 1 mill, where the system is not installed. In rooms where dust or fumes accrue they are removed by a system of exhaust fans that help materially to keep the air clean and pure. The girls' work is made as comfortable as possible for them, and they are allowed stools which they may use when they are tired or when the character of the work does not necessitate their standing. The drinking water is obtained from springs situated about the mills, and every precaution is taken to have it free from any pollution, tests being made at intervals to guard against any chances of sickness.

The old dirt roads that once surrounded the mills have been replaced by macadam roads, lawns have been created, shrubbery planted, vines started around the mills, and the whole appearance changed. It was interesting to see, after the development had started, the exact influence created. It was, however, as we expected it would be. The employees took home with them the lessons we were endeavoring to teach. They started to fix up their own grounds: walks that had never seen the edging knife were edged, and lawns were carefully cut, which at once began to lend an entirely different character to the homes of the employees.

The company at this time possessed several tenement houses, which contained groups of four and eight tenements under one roof. These tenements contained a living room 9 feet 11 inches by 12 feet 1 inch; kitchen, 13 feet 8 inches by 14 feet 5 inches with entry 5 feet 7 inches by 9 feet 6 inches; two rooms, 12 feet 1 inch by 15 feet and 14 feet 5 inches by 15 feet, both with large closets. The houses were situated within 5 feet of the road, allowing only a small front yard. Each house was allotted a garden, where, during the summer, the employees could raise their own vegetables. The only plumbing in these houses consisted of one sink situated in the small entry. The rent was from \$1.50 to \$1.75 per week. With the building of the new houses the old type was discarded, and on the new tract of land which was purchased lots were laid off about 100 feet wide, and 150 feet deep. Two-family houses were then planned and built along more modern lines, the

Dinners taken from one week's menu are as follows:

Monday.

Pot roast, boiled potato, mashed turnip	\$0. 10
Apple pie	.02
Cottage pudding, lemon sauce	.03
Doughnuts	.01
Rolls	.01
Coffee	.02
Tea	.02
Milk	.02

Tuesday.

Meat pie, mashed potato	. 10
Cranberry pie	.02
Apple pie	.02
Layer cake	.03
Doughnuts	.01
Rolls	.01

Wednesday.

Boiled lamb, caper sauce, scalloped potato	. 12
Cream pie	.03
Mince and apple pie	.02
Doughnuts	.01
Rolls	.01
Chocolate	.03

Thursday.

Boiled ham, mashed potato, macaroni	. 10
Custard pie	.03
Apple pie	.02
Gingerbread	.01
Doughnuts	.01
Rolls	.01

Friday.

Baked haddock, mashed potato, scalloped onions	. 12
Squash pie	.03
Cocoanut pie	.02
Doughnuts	.01
Rolls	.01

There is no service; the men are obliged to wait upon themselves. They buy their coffee at one place, move on to the next, buy their dinner, and then take it to their table. The dining hall contains the following rooms: On the first floor is a serving room, a large dining room for men, that will hold about 200, and leading off the main room is a smaller room for the office help. The men's toilet rooms are also situated on this floor. The lower part of the building is given up to a dining room for the girls, with rest rooms and toilet. The kitchen, cold-storage cellar, and manager's room are also situated on this floor. The material is the best of its character that we can procure. Everything is made in our own kitchen, so that we are perfectly sure of the material that goes into the food.

The total of each of the articles sold at Harris Hall during the past year is as follows: 9,539 cups of coffee, 2,414 cups of tea, 435 cups of

chocolate, 4,214 glasses of milk, 4,383 pieces of pie, 6,262 dinners, 14,747 rolls, 2,906 doughnuts, and 574 miscellaneous dishes.

The hall, with its large verandas and spacious interior, lends itself also to social functions, such as band concerts, dances, and club meetings of different kinds.

The girls in our mill formed a social club seven or eight years ago, the members then numbering between 8 and 10. The girls started up work in sewing, courses in English and Italian, and in art. From year to year the club has grown so that now there are enrolled in its membership some 80 girls, most of whom work in the mill. However, there are a few young ladies who have had the advantages of higher education who have been induced to join. They have brought in new ideas and have helped a great deal in raising the standard of the club, for they bring to bear the influence that tends to develop the character and stimulate the desire of higher ideals in life.

A small dwelling house, which is situated at the entrance to the factory, was turned into a school building. A kindergarten was started under the direction of a trained kindergartner. The first year the school contained about 23 scholars, the second year about 30. The third year we found it necessary to engage an assistant, the number then reaching 40. This winter the school has enrolled 53 scholars. The kindergarten in many ways is a great help, not only to the children but also to their mothers, for it takes the children away from the house in the busiest part of the day and gives the mother time to do her work unmolested, while the children return with new ideas and brighter faces. The teachers make visits about the houses and interest the mothers in the children's work. They also bring a little social life once a month when they have mothers' meetings at Harris Hall. The largest gathering of this kind occurs at Christmas time, when the children are given a Christmas tree. The proud mothers seated about the hall, seeing their little tots marching around the tree, singing and clapping their hands, begin to smile simultaneously with the children as their little faces beam with delight at the sparkling stars and trimmings of the tree.

The second step in the school was the addition of a sloyd department (Plate 123). A room was fitted up with ten benches. The school at first was only for the boys who worked in the mill, the other boys of the family having the advantage in the public schools. The school is carried on four evenings a week, making 40 boys enrolled in the course. Later the girls became interested in the work, so a girls' class of 10 was added, making 50 in all. In connection with this work we have established classes in basketry and the making of cane seats to chairs.

Another branch of the industrial work is the cooking school. Probably there is no branch of the school that does more real good than this. The children are allowed to attend the school at the age of 11 years. The school is held in the afternoon after the public schools, from 4 to 6 o'clock. Good, plain cooking is taught—how to make a dinner from cheap cuts of meat, the proper food to buy, and the correct combinations to use to build up the tissues of the body and brain. The making of bread, pastry, preserves, jellies, and the preparation of cereals are also touched upon. The course in cooking is three years. Generally the girls leave then and come to work in the mill.

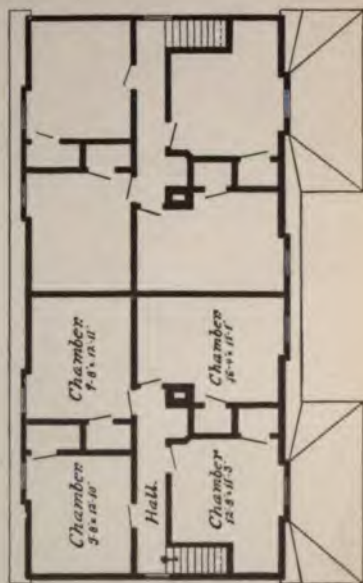


PLATE 118—HOUSE FOR EMPLOYEES, PLAN V

PLYMOUTH CORDAGE COMPANY



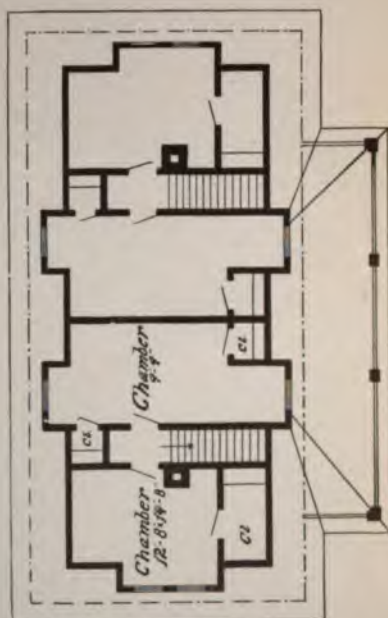
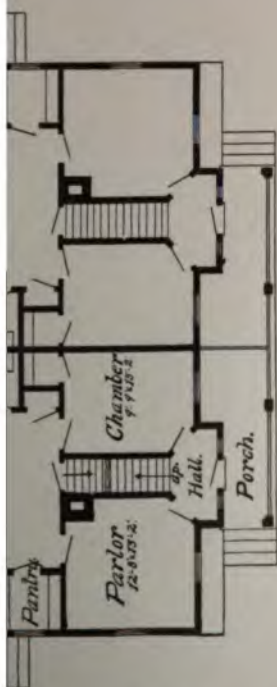


PLATE 119—HOUSE FOR EMPLOYEES, PLAN X

PLYMOUTH CORDAGE COMPANY





PLATE 120—HOUSE FOR EMPLOYEES



PLATE 121—HOUSE OWNED BY EMPLOYEE

PLYMOUTH CORDAGE COMPANY





PLATE 122—LORING READING ROOM



PLATE 123—SLOYD SCHOOL
PLYMOUTH CORDAGE COMPANY

On June 13, 1903, the directors were given a dinner at Harris Hall, the menu being as follows:

	Little Neck clams.	
	Consomme.	
Olives.	Radishes.	Salted almonds.
	Fillet of sole, tartar sauce.	
	Cucumbers.	
	Fillet of beef, mushroom sauce.	
Potato balls.		Asparagus.
	Tomato salad.	
Strawberry ice cream.		Frozen pudding.
Sponge cake.		Almond cake.
Crackers.		Cheese.
	Coffee.	

The cooking-school girls prepared most of the food and served it at the tables. The children that attend the school number about 40. If there is anyone in the community who is very ill, the children are shown how to prepare food for invalids and how to present it attractively, after which a few of the pupils carry it to those afflicted. It not only teaches them how to prepare the food, but also shows them the pleasure of doing for others.

The men who work in our machine and carpenter shops were desirous of studying mechanical drawing, and courses were started for them; also, there are several boys who have become interested in the work. The first year is given up to the fundamental principles of drawing; the second year takes up descriptive geometry and drawing of different parts of machinery; the third-year work takes up the more advanced machine work; the fourth-year work takes up elementary design. Several carpenters have taken up the course, in which case we have altered it to correspond more with their line of work. The men have benefited very much by the course, and some of them, who at the outset were unable to read a plan, can now work intelligently from one.

A band was organized about two years ago, the company furnishing the rooms to practice in and advancing the money with which to procure many of the instruments. The band plays at all baseball games that are held on the grounds and also plays morning and afternoon at our Labor Day show. During the winter months the band gives concerts every two weeks in Harris Hall, the proceeds of which are divided with several benefit societies which have been organized by the employees: The United Workers' Circle of King's Daughters, the Old Colony Mutual Benefit Association, and the German Brotherhood.

As the company is situated some distance from the town, many small groceries spring up to supply the employees with their staples of food. The company, not satisfied with existing conditions, bought out some of the stores and started a large one under the head of the employees' cooperative store. The company furnished sufficient capital to start the store along the following lines: That the company would not receive any interest on the money invested; that it should be a cooperative business entirely for the employees' benefit, they to receive their share of the profits pro rata as their accounts showed on the books.

Naturally the taking over of old stock and the starting of a new enterprise necessitates time to tell whether or not it will prove to be a success in every way. There is one thing certain, and that is they

get far better material than formerly for the same amount of money, from a clean and well-kept store. All groceries are delivered by three teams which cover the scattered territory.

Some of the company's property skirts the shore of Plymouth Bay, and here we have established a bathing beach where the employees may enjoy themselves. The slope of the land made it necessary to build it out and restrain same by a parapet wall. This, however, had its advantages, as it made a splendid playground for the children, where they could dig in the sand and enjoy the fresh breezes of the ocean without wetting their feet and dresses. It makes a splendid park in which the people may gather. On Sunday afternoons whole families may be seen enjoying themselves—the father and mother taking a dip while the little ones are busy making sand houses on the beach. On several Sundays there were from 600 to 700 people spending the afternoon watching the bathers as they dove and swam about. There are two bath houses, one for the men and boys and the other for the women and the girls. The company furnishes suits for the bathers at the low rental of 1 cent per suit; also towels at 1 cent each. Suits are also on sale at wholesale prices. The bath houses are in charge of an experienced man, who teaches the boys and girls to swim, dive, and float. During the last two summers there have been more than 9,000 baths taken. One generally finds the beach lined with young people every afternoon, except Saturday.

On Saturday afternoon the interest of the crowd centers around the ball field, which is situated back of the office building. Every Saturday afternoon, weather permitting, a game is held between our own club and a visiting team. The team has been growing stronger each year, winning the majority of the games played. Each year they have played against stronger teams, and this resulted last year in several games nearing the standard of some of the leagues. The games were witnessed by 700 to 800 people each, and are free, with the exception that they give what they think they can afford to help defray the expenses of the visiting team.

All of the baseball games, and, in fact, most of the social work is reported in a paper that is published once a month, called *The Plymouth Cordage Chronicle*. The paper is published in three languages, English, German, and Italian.

Two years ago there were courses carried on in agriculture, horticulture, and poultry, to show and educate the people in the handling of gardens, etc. There were so few that were able to take advantage of the lectures that it seemed advisable to issue them through a paper; they could then be brought out to all the people at once. This proved a success, and the whole social work was then brought before them by this medium.

All the work that is done in the schools and in the houses of the employees is in anticipation of a fair that is held on Labor Day. Labor Day, in its true sense here, brings out the work that the people have done all summer. As early as 5 o'clock in the morning the employees leave their homes with wheelbarrows, little carts, and arms filled with vegetables. It needs only a few little donkeys with packs on their backs to lend to the scene a true Italian setting of the early morning market time in Verona or Perugia. Boys and girls are running here and there to deposit their handiwork on the proper table, while the quacking of ducks or the crowing of a rooster announces the arrival

of a new poultry guest to show off his feathers in the coming competition with his neighbors. Children laden with flowers, which almost hide their tiny faces behind their blossoms as they sway back and forth in the breezes, lend a cheerful greeting as they enter the miniature fair. It requires a tent 160 feet long and 60 feet wide to cover the exhibition of vegetables, fruit, fancywork, flowers, school work, cooking, poultry, and handiwork. The company also offers prizes for vegetables and flower gardens that are kept up in the best manner during the summer, also one for the places, trees, and vines. The places are visited by a competent judge three times during the summer, and a complete record is kept. The prize winners are posted in the tent.

The fair is open on Labor Day from 12 to 6 o'clock, and also on the day following from 7 a. m. to 6 p. m. During the morning, while articles are being put to rights, the people are gathering on the ball field, which has been laid out for athletic contests which have been scheduled to begin at 9 o'clock. The Plymouth Cordage Band, of 42 pieces, starts the event moving with a band concert from 9 to 9.30. Last September there were over 5,000 people to witness the sports that began at 9.30.

Programme.

- 9.00. Band concert.
- 9.30. Running race, 18 years old and over; best two out of three, 200 yards.
- 9.35. Basket contest.
- 9.45. Fish pond, for girls.
- 9.55. Stilt race, for boys.
- 10.00. Three-legged race, 200 yards.
- 10.10. Second heat running race.
- 10.15. Half-mile foot race.
- 10.30. Sack race, 60 yards.
- 10.35. Third heat running race.
- 10.40. High jump.
- 10.45. Blindfold wheelbarrow race, for boys.
- 10.55. Hitting the dummy, for girls.
- 11.05. Relay race, Walk r. Mill, 800 yards.
- 11.30. One mile bicycle race.
- 11.35. Obstacle race.
- 11.50. Greased pole and barrel, for boys.
- 2.00. Band concert.
- 3.00. Baseball game.

In the grouping of 5,000 people the combination of colors was exceedingly interesting and varied, which lent to the scene a decidedly picturesque and unique effect. After the people had watched their friends lose or gain the coveted prizes they left their seats for an inspection of the tent. Many of the people returned in the afternoon to witness the final baseball game of the season. If we take into account the people who attended the different events during the day, the fair was witnessed by nearly 8,000 people. This shows quite a growth from the first fair that was held four years ago in a small house. One room, 12 by 14 feet, was given up to vegetables; one room, 14 by 15 feet, to poultry, and one room, 12 by 12 feet, to flowers; the attendance being about 800.

Often during the games on Labor Day, and the ball games, slight accidents are apt to happen: also, in a mill where hundreds of people are working about moving machinery the chances of accident are many, so a room was fitted up with the necessary equipment to care for such matters. But with the hospital came the question of who should

care for it, and trained nurses were engaged to take charge of the work. Their work at present lies not only in the small hospital, but much of their time is given up to making visits to all of our employees who are sick or in need of their services, administering to them the proper care and bringing to our attention existing conditions about the places and houses that should be changed. In cases of extreme sickness one nurse gives her attention during the day and the other at night. The company furnishes the nurses with a house in close proximity to the houses and mill. During the past six months there were about 750 cases that required their attention. In many cases we have had the sincere thanks of our employees, and they all feel that it has filled a long-felt want.

Many times when acute diseases make it impossible to stem the current, and when men who have worked among us for many years are taken away, their wives and children oftentimes would be left in poverty but for the benefit societies that have been formed among the workingmen and women. There are three societies that carry on this work:

The United Workers' Circle of King's Daughters, this society raising money by fairs and distributing it among those requiring assistance.

The German Brotherhood was organized the 1st day of September, 1883, with a membership of 28 men and a capital stock of \$224. The membership has increased to 72, and at date of writing the society has \$600 in the bank. The society has—

Collected from the members during the existence of the society	\$5, 566. 60
Paid out for deaths of members, 11 in number.....	655. 00
Paid out for deaths of wives of members	272. 00
Paid out for sickness.....	4, 590. 00

The Old Colony Mutual Benefit Association was organized June 27, 1878. The dues of the association are \$4 a year. This gives an accident benefit of \$4 a week for twenty weeks; also includes a death benefit of \$150.

The association has received	\$8, 863. 78
Paid out in sickness and death benefits	7, 707. 48
It has on deposit	1, 156. 30

If the employees are not fortunate enough to belong to these societies the men are generally ready to start a paper through the mills for their benefit.

THE JOHN B. STETSON COMPANY, PHILADELPHIA, PENNSYLVANIA.

This company, now incorporated as a joint-stock company with a capitalization of \$4,000,000, was established in January, 1865. Its product consists of high-grade fur-felt hats and its manufacturing operations include not only the making of hats but also other branches of industry connected therewith, such as the manufacture of machines for use in the factory, the weaving of silk bands and bindings, the printing of hat tips and the commercial printing of the factory, the making of paper hatboxes, the making of the block upon which the hat is formed, leather cutting, etc. From information recently secured by Mr. Frank J. Sheridan, a special agent of the Bureau of

Labor, it appears that the number of employees during 1903 aggregated over 2,400, of which over 1,900 were males and over 500 females. The number employed in 1903 was more than double that employed in 1898 (1,144) and nearly three times that employed in 1895 (945). The production likewise amounted to 102,181 dozens of hats in 1903, as against 44,492 dozens in 1898 and 37,996 dozens in 1895. It was also ascertained that steady employment has not only been offered during the past fourteen years, the term for which a record was available, but that the company has made special efforts to encourage steady and continuous work by its employees.

A very complete and comprehensive system of betterment has been in operation by this company for some years, resulting not only in better and more comfortable working and living conditions to the employees, but also in a greater personal interest of the employees in the business of the company and a correspondingly better quality of product. The forms of betterment adopted have been varied and in some respects unique, but their effectiveness and good results have been most marked. A brief description of some of the features of this work will be given in the following pages.

While this company does not build houses to rent to its employees, it has encouraged saving and home building among them in the strongest possible way. For some years it has offered to its employees as a reward for efficient service shares in a building and loan association conducted under the auspices of the company, upon which money for the purchase of homes (but for no other purpose) can be borrowed at any time. These shares, which are paid for and carried to maturity by the company without any cost whatever to the holder, are designed to take the place of extra wages and are given only to such operatives as show unusual efficiency in their work. The number of employees for whom such stock was maintained at the date of the last report was 203, the total number of shares being 1,418, and the largest number held by one person 30. Twenty-eight homes have been acquired by employees under the operation of this plan (Plate 124). In addition to these, this association, which was organized in 1879, has been the means through which 11 houses have been purchased with stock maintained by employees themselves, and 24 with old shares matured, making a total of 63 homes up to the present time secured through the medium of the building and loan association. It is stated that 15 per cent of the adult male employees of the company now own their homes, while 289 now hold shares in the association.

The Stetson savings fund was established in 1897, the purpose being to encourage operatives to save their money by making deposits in small weekly amounts. These deposits are limited to such portions of an employee's earnings as, in the opinion of the management, he

can permit to remain for his future use, \$10 being the maximum amount received from any one individual in a week. The company allows 5 per cent interest on deposits which are allowed to remain until the end of the fiscal year. If withdrawn during the year the deposit is not entitled to interest. At the time of the last report the depositors numbered 228, or about 10 per cent of the entire number of persons employed by the company. The amount on deposit, with the accrued interest, was \$17,381.90, making an average of \$76.24 for each depositor.

A system of profit sharing possessing very unique and unusual features was adopted by the company in 1902. At a meeting of the stockholders in the fall of that year it was decided to place at the disposal of the president and board of directors 5,000 shares of the increased common capital stock, of a par value of \$100 each, to be used by them for distribution among the company's employees under such terms and conditions as they deemed proper. The plan, as adopted, differs from the usual form of profit sharing in that the allotment of stock to an employee is not conditioned upon his age or upon the length of time he has been in the company's employ, nor is the amount of stock allotted to him dependent on the salary he receives. Moreover, the stock eventually becomes the absolute property of the employee without any expense to him whatever. The following statement concerning the operations of the plan has been furnished by the company:

Certificates for the allotted stock are issued in the name of five trustees, and the certificates are not transferred to the names of the individuals until the expiration of fifteen years, except in the event of the death of the employee or his severing his connection with the company.

As dividends on the allotted stock are declared and paid, each individual is credited with his proportion of the dividends less 5 per cent on the balance due on the stock at the close of the year. When the accumulation of dividends, less the interest charge, amounts to the par value of the stock, the employee is then paid the full amount of dividends that are declared each year, but, as stated above, he can not come into possession of the certificate itself until fifteen years have elapsed. The object of this provision is at once apparent—it insures a steady income for the employee so long as he is in our employ, by preventing him disposing of his stock.

The employee has the privilege of drawing from the dividends declared each year an amount equal to 5 per cent of the par value of the stock. If he avails himself of this privilege the stock is not paid for as quickly as if he were to allow all the dividends to accumulate.

In the event of death there is handed to the executors a certificate of stock of the par value of the amount that stands to the employee's credit on the books. If the employment of the individual is terminated because of his physical or mental condition preventing him discharging his duties, settlement is made in the same way as in the event of death; but if the employee is discharged for cause, there is handed

u a check for the amount at that time to his credit on the books.

That the difference between paying by check and by certificate may be understood, it is necessary to state that at this time the stock is selling on the market for 177. While the market value of the stock during the year has ranged from 165 to 177, it has been allotted the employees at par—\$100 per share.

Up to the present time 3,000 shares of the common stock of the company, in lots of five shares and upward, have been distributed among employees under the terms of this plan. The number of journeymen to whom shares have been allotted is 244, and the total number of shares so allotted 1,225. As the dividends paid on the stock of the John B. Stetson Company have averaged about 17 per cent for the last several years, with a probable increase for 1903 consequent upon an increased amount of business done, it is estimated that the accumulation of dividends, less the interest charge, will equal the par value of this stock in about six years.

The beneficial fund maintained by the company is also worthy of special notice. This fund is supported by a monthly assessment of 25 cents on each adult worker, apprentices under 18 years of age paying 15 cents per month. Employees incapacitated for work by reason of illness or injury are paid \$5 a week for a period of five weeks in each year, or \$3 a week if under 18 years of age. In case of death the sum of \$100 is allotted for funeral expenses to adults and \$75 to apprentices. The report of the association for the year ending November 9, 1903, shows that during that period 382 employees received sick benefits from the fund in various amounts up to \$25, while \$2,100 was paid on 22 cases of death.

A novel feature introduced by the company in 1897 was the adoption of a system of premiums for regular and faithful work in the sizing department, where the roving habits of the workmen, many of whom were of foreign birth, had become a source of serious annoyance and inconvenience to the management. To remedy these conditions it was decided to offer to the men who worked steadily throughout the year an amount equal to 5 per cent of the total wages earned, this amount to be presented to such employees in the form of a Christmas gift. Under the operation of this plan 35 per cent of the sizers employed in 1897 remained until the end of the year. For the three succeeding years the premium was increased to 10 per cent, with the result that the number of steady workers increased from 50 to 80 per cent of the entire number. In 1901 and 1902, with 15 per cent premium paid, the percentage reached 88, while last year 92 per cent of the total force in the sizing department received 20 per cent increase on their wages as a reward for faithful service. The result of this beneficent policy has been not only to insure larger incomes to the men, and at the same time instil into their minds the principles of steady and constant application to their work, but it has also enabled the company to

calculate with greater certainty the amount of work that can be turned out of this department in a stated time. As the wages paid in the sizing department are by the piece, it is seen that from a monetary standpoint the company receives no direct return for its outlay, as might be the case were the men working by the day or by the week.

The presentation of life-insurance policies to employees is another form of reward adopted by the company. These policies are mainly on the twenty and twenty-five year endowment plan, the premiums being paid by the company, and the accumulated dividends turned over to the beneficiary when the policy becomes due. At the present time there are in force 18 policies of insurance, two of which are for \$10,000 and the remainder \$5,000 each. Since the adoption of the plan 9 policies, aggregating \$200,000, have matured.

It has long been the custom of the company to present to apprentices upon the completion of their term of service, a sum of money equal to \$1 for every week spent in the establishment, or \$208 for the full four year period. This amount is regarded as in no way connected with their wages, but is a gift by the management to those who have faithfully fulfilled their obligations to the company. A customary feature of the Christmas celebration at the factory is the distribution of prizes among those apprentices whose work for the year has been pronounced of more than ordinary merit. These prizes vary in value from five-dollar notes to watches costing as much as \$50, special prizes of still greater value, including money and paid-up shares in the building and loan association, being awarded apprentices who have made notably good records. It is also the custom of the company on Christmas eve to present every man in its employ with a hat or a turkey and every girl with a pound of the best candy or an order for a pair of gloves, regardless of price or quality.

For the social and intellectual culture of its employees the company has erected at one end of the factory buildings a large assembly hall, capable of seating 2,000 persons, which is furnished with a grand and a parlor organ and a piano. There is also a parlor for evening social meetings. A large Sunday school, whose membership includes at times as many as 1,400 persons, meets in the assembly hall. An organization similar to the Young Men's Christian Association, known as the John B. Stetson Union, is doing much good among the male operatives. The Christian Endeavor and choral societies are both growing forces. A large library and reading room which contains 2,000 choice volumes and many of the leading newspapers and periodicals is also maintained. Books are furnished employees free of charge.

A medical department under the charge of a leading physician has been established by the company and operatives are treated at a nominal price, or gratuitously when necessary. A hospital building 75 by 102 feet and four stories in height is now being erected for this



PLATE 124—TYPICAL HOUSES PURCHASED BY EMPLOYEES WITH THE AID OF BUILDING AND LOAN ASSOCIATION STOCK GIVEN BY THE COMPANY FOR EFFICIENT WORK

J. B. STETSON COMPANY

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department. The Union Mission Hospital, conducted in connection with the establishment, has been in operation some years and is fully equipped with all modern appliances.

As a result of the numerous efforts put forth by the John B. Stetson Company for the moral and material well-being of its employees, it is claimed by the management that not only has the quality and quantity of the work done in the factory greatly improved, but that there has been a substantial increase in the company's business and profits.

S. D. WARREN & CO., CUMBERLAND MILLS, MAINE.

Although most of the houses built by this company were erected a number of years ago, and consequently are lacking in some of the features possessed by more recently constructed buildings, they are, nevertheless, among the most tasteful and conveniently arranged dwellings of their class to be found anywhere. One type of house built by this company is one and one-half stories in height and is built of wood, with brick foundation (Plate 125). The interior accommodations consist of a hallway, a parlor, a dining room, and a kitchen on the first floor, and four sleeping rooms of fair size and a smaller chamber on the second floor. A porch, over which the upper story projects, occupies one corner of the house. The interior is neatly papered in attractive patterns, the floors and woodwork being finished in oil or painted. The kitchen is provided with a hinged table and a sink, and each bedroom has a large clothespress. A cellar with cemented floor serves as a storeroom for fuel and provisions. In this is located the water-closet, which connects with the sewer outside. Kerosene is used for lighting and coal and wood for heating and cooking. Garbage is deposited in a can provided for the purpose and is removed at stated periods. The exterior of the house is kept neat and attractive in appearance by the company, which also sees that the interior is in proper condition before a tenant moves in. If any changes or repairs are made while the tenant is occupying the building he must bear the expense.

The lot upon which this house stands has a frontage of 50 feet and is 100 feet in depth. The building occupies 720 square feet, leaving a considerable space at the side and rear for yard and garden. The rental is fixed at \$9.35 per month, including full water privileges. As the value of the house is estimated at \$1,500, not including the land, this is considered a very moderate return to the company on the investment. The rent is calculated on the following basis:

	Per year.
Five per cent of \$1,500 (value)	\$75. 00
Taxes	22. 00
Water	10. 00
Insurance	1. 50
Total	108. 50

The same rule is applied in determining the rental of other houses.

Another type of house, similar as to general plan and interior arrangement, but differing somewhat externally, contains two rooms on the lower floor and four chambers above. The common kitchen or living room of these houses is quite large, and they have always been quite popular with the operatives. The rental, with water, is \$8.17 per month.

A number of dwellings owned by employees of the company were built under the following conditions: Believing it better policy to encourage operatives to acquire homes of their own than to build and rent to them, the company some years ago purchased a tract of unimproved land in the vicinity of the mills, put in sewers and other improvements, laid out streets, and sold lots to employees, at a price which did not more than cover the cost of the land with its improvements. Money for the construction of houses was advanced at 4 per cent interest, building plans were furnished free of cost, and each worthy employee was given an opportunity of securing a home, even when he had nothing to offer in the way of security. Under this plan nine houses, ranging in value from \$1,500 to \$3,000, were erected, and the scheme would probably have had a much larger development but for the fact that, shortly after it was put into operation, an electric road was built through the village, connecting it with Portland a few miles away. This road had the effect of concentrating the building improvements of the village along its line and rendering the company's property, which was somewhat remote, less attractive to the operatives than it would otherwise have been.

In 1895 the company owned 96 houses, with a total estimated valuation of \$150,000. Of this number 12 contained four rooms, 8 five rooms, 30 six rooms, 39 seven rooms, 3 eight rooms, 3 nine rooms, and 1 twelve rooms each. In addition there were 2 boarding houses, with fifteen and twenty rooms, respectively, for the accommodation of unmarried employees.

These dwellings are seldom vacant, and there is practically no loss of rental. A most generous policy is observed by the company in dealing with its tenants. Ejection is never permitted. When a tenant is sick and unable to meet his payments, he is allowed to defer them until such time as may suit his convenience. Subrenting is not permitted, but tenants may receive boarders if they desire. The company states that houses for one family have given the greatest degree of satisfaction and that they are the ones most preferred by employees.

The paper mills operated by the company afford employment to about 1,000 persons, representing approximately 400 families. The larger part of these are now owners of their own homes, having been

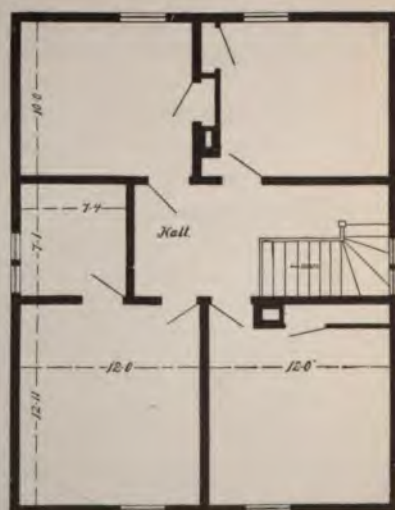


PLATE 125—HOUSE FOR EMPLOYEES, PLAN Y

S. D. WARREN & COMPANY

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ble to save sufficient means to build for themselves. In this they have been encouraged and helped by the company, which considers home-ownership a very important factor in promoting the welfare and contentment of the workingman.

A free library and reading room, maintained by the company, is an important educational factor in the community. This contains about 1,000 volumes of standard reading matter, in addition to which are found all the leading magazines and other publications. It is situated on the second floor of the building in which the company's offices are located, and is much frequented by the employees. The original cost of the library was about \$5,000, and some \$300 a year is required to defray running expenses. A literary society, composed of women employees, meets regularly in the library. There is also a large hall, erected by the company at a cost of nearly \$10,000, which is used for lodge and other society gatherings.

WESTINGHOUSE AIR BRAKE COMPANY, WILMERDING, PENNSYLVANIA.

The plan of providing dwellings for their employees was first adopted by this company some twelve or thirteen years ago, at the time of the removal of its factory from Allegheny to Wilmerding. A tract of unoccupied land adjoining the works was purchased, upon which the company constructed a number of houses very economically by making large contracts at cash prices. These dwellings were sold to employees at about cost and upon terms which enabled them to pay for the properties in monthly installments extending over a period of ten or fifteen years. In this way a number of houses were acquired by the better class of operatives; but the plan was afterwards abandoned, as it was found that the liberality of the terms induced purchases by persons who had not previously formed the habit of saving and who found it very difficult to keep up with their payments, especially during slack times. Under the plan now in force the purchaser of any property is required to pay about one-fifth of the purchase money in cash upon delivery of deed. He then executes a purchase-money mortgage, payable in five years, with interest payable quarterly at the rate of 5 per cent per annum. While no requirement is made, it is expected that the purchaser shall reduce the principal of the mortgage quarterly by such payments on account as he may be able to make. This plan enables him, during hard times, to keep the transaction in good shape by merely paying the interest, while, on the other hand, when good wages are earned, he can discharge such part of the principal of his mortgage as he may desire.

The houses built by this company are of excellent construction and of pleasing architectural style. The photographs shown herewith illustrate the different types of dwellings erected, while copies of a

number of the building plans afford information as to their arrangement and construction. Among the best of the different classes of houses is a two-story brick dwelling, containing seven rooms, including the attic, renting for \$22 per month (Plate 126). Another class of dwellings is that built to accommodate two families (Plate 127). This is in the nature of a double house, each side having six rooms besides the attic, and renting for \$18 per month. Each tenement has a hallway, a large parlor, a dining room, and a kitchen on the first floor, while the second floor consists of three bedrooms, one 18 by 14 feet, the other two of fair size, and a well-arranged bathroom. The attic measures about 20 feet square, making a convenient place for storage purposes, while a large cellar, extending under the entire house, affords ample room below ground.

A row of brick buildings contains a number of tenements, ten in all, each having seven rooms and being provided with separate entrances, both front and rear (Plate 128). The first story contains a hallway, a living room or parlor, a kitchen, and a bathroom. On the second floor are three large bed chambers, while two more rooms are finished off in the attic. Each tenement is provided with a good cellar. The rental of these houses has been fixed by the company at \$16 per month, with the exception of those on the corners, which rent for \$18 a month.

All of the foregoing houses are equipped with gas ranges for the use of natural gas, hot and cold water, porcelain-lined bath tubs, inside lavatories and electric-light fixtures. Some have gas furnaces for heating, while others have open fireplaces for gas. All have slate roofs.

The company has also built a series of cottage flats for the use of small families. These buildings, of which seven have been erected, contain ten flats of three rooms and bath on the first floor, and ten flats of four rooms and bath on the second floor, with separate entrances to each. Each is provided with a good cellar, and some of the more recently constructed ones have wide porches at the back. These flats are well constructed and have proved quite popular, the moderate rent asked putting them within the reach of many who could not pay the prices charged for the larger and more expensive houses.

A number of frame dwellings of different types have also been built at various times. These rent at prices ranging from \$14 to \$22 per month. The lots upon which these houses are located are from 30 to 40 feet in frontage and from 100 to 120 feet in depth. Practically all houses have bathrooms and a number are heated by furnace as well as by fireplaces.



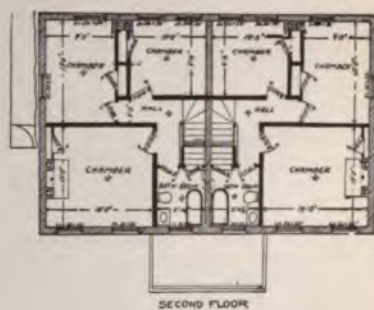
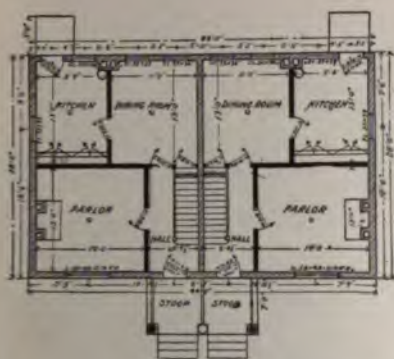


PLATE 127—HOUSE FOR EMPLOYEES, PLAN AA

WESTINGHOUSE AIR BRAKE COMPANY

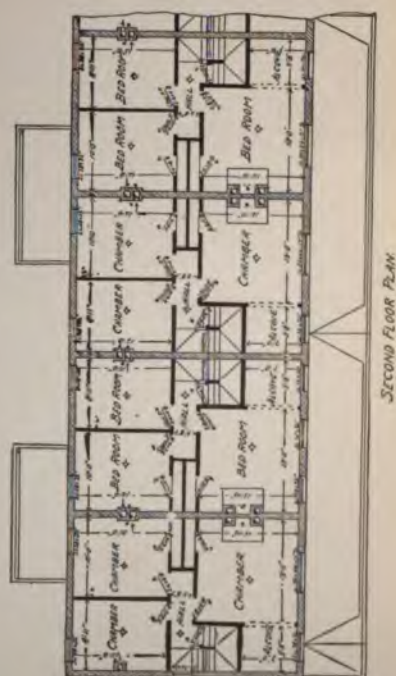
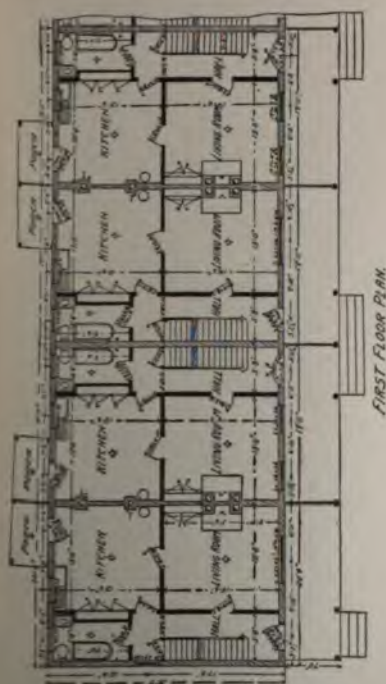


PLATE 128—HOUSES FOR EMPLOYEES, PLAN BB

WESTINGHOUSE AIR BRAKE COMPANY

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In order to encourage the beautifying of homes and surroundings the company has adopted the plan of awarding prizes to those of its tenants whose yards and lawns are kept in the best condition. In 1902 the prizes offered were as follows: For ground as a whole, first prize, \$35; second, \$20; third, \$15; fourth, \$10, and three prizes of \$5 each. Special prizes: For best work in flower culture, \$10; for best work in vegetable culture, \$10; for best lawn, \$5; for best window or porch box, \$5. A number of smaller prizes were also distributed among those whom the judges decided to be worthy of them. Competition for these prizes is not restricted to the company's employees, but is open to all residents of the village in which the works are located.

PUBLIC BATHS IN THE UNITED STATES.

BY G. W. W. HANGER.

For many years the maintenance of public baths at public expense has been a feature of municipal government in the leading countries of Europe. In the United States, however, the movement for public baths has assumed importance only during recent years. The value of these institutions from both a social and economic point of view can not be denied. They not only offer the means to personal cleanliness to those who can afford but meager facilities in their homes or tenements and thereby stimulate in a powerful way a feeling of self-respect and a desire for self-improvement among this class, but they also promote health and afford recreation. It has been urged that they serve to ward off disease, and it is quite certain that in thus conserving the health and earning capacity of working people their economic value must be recognized.

Previous to 1890 but few cities in the United States offered any public facilities for bathing, and these, with the exception of the service furnished by a small gymnasium in Boston, consisted entirely of such as could be used during the warm season only. Boston, New York, Brooklyn, and several smaller cities had established floating baths on the shores of adjacent waters; Boston had also established two beach baths, while Philadelphia and Chicago had constructed pools for summer bathing. The inadequacy of these facilities was recognized by all, and the suggestion of a practical method of supplying hot-water cleanliness baths which should be available in winter as well as in summer was made at about this time. It is stated by Dr. Harvey E. Fisk that the first plea for the rain or shower baths in this country was made by Dr. Simon Baruch, of New York, in 1889. Doctor Baruch had investigated the working of the public baths of Germany, and upon his return earnestly urged the adoption of this type of bath. A report, which was made by him as chairman of the committee on hygiene of the New York County Medical Society, is quoted in part as embodying the result of his investigation of the subject:

Modern hygiene has, by simplifying the methods of applying its principles, attained remarkable achievements. Its chief advances have been made by the recognition of cleanliness as the essence of true sanitation. Just as the modern surgeon has, by gradual step and deductive reasoning, reached the conclusion that in strict cleanliness of his person, of his instruments, and of the surface to be treated is to be

found a true asepsis, so has the modern sanitarian come to realize that strict cleanliness applied to the air, to food, to clothing, and to the person fulfills the chief indications of true hygiene.

This learned body does not need to have the importance of personal cleanliness impressed upon it by stilted phrases, nor need your committee dwell upon the immense sanitary advantages accruing from the maintenance of the functions of the skin by the disciplinary and depurative action of the bath. These are truisms with which even the lay public are sufficiently familiar.

How to secure to the needy classes—among whom diseases arising from, and encouraged by, lack of cleanliness are most rife—access to baths which will not repel them by expensiveness, loss of time, and lack of convenience, is a subject that your committee has carefully considered and practically investigated.

The baths which our city authorities have wisely and efficiently provided during the summer months have proved successful in the encouragement they have given to that portion of the community whose only means of obtaining a bath is in our open waters. Cleanliness and refreshment are thus secured to a small but needy portion of the community. But these are chiefly utilized by the younger and more vigorous portion of it, because they involve a certain expenditure of energy and resolution. In winter, when thick clothing and unventilated dwelling rooms most encourage the accumulation of excreta and filth upon the skin, these open baths are entirely unavailable.

Your committee would recommend the erection, in the midst of our populous tenement districts, of public baths which, by their accessibility and freedom from expense, would tempt the populace into the practice of bathing as a habit. This would be bathing for cleanliness, a true sanitary measure whose power for preventing the origin and spread of disease need not be insisted upon in this society. The problem has already been practically solved in Germany, where, under the stimulus of Lassar's labors, public baths have been erected in several large cities, which fulfill their objects most admirably—and which may serve as examples worthy of imitation. In this city also a number of benevolent gentlemen have formed a society for the promotion of public baths. Prizes have been offered for the best plans of such buildings, and, judging from the character of the gentlemen engaged in the work, it will doubtless be carried to a successful issue.

Several points should be constantly held in view in the construction of public baths:

First. They must be located in the very center of the overcrowded districts.

Second. Their exterior must be modest, so as not to repel the poor and lowly by their architectural pretensions.

Third. They should be so constructed that a cleansing bath may be obtained without trouble or expense, or at a very trifling expense, and without sacrifice of much time.

The distinguishing characteristic of the public baths which may now be found in many German cities and in some large factories is the abolition of the bath tub and the substitution of a warm rain or shower bath for the old-fashioned tub bath.

The advantages of such warm shower baths, falling with considerable force, from a reservoir of some height, upon the body, are self-evident.

First. The outlay for tubs is avoided, as well as the cost of their wear and tear.

Second. The avoidance of filling, emptying, and necessary scrubbing of the tub for each bath economizes labor and expense.

Third. The time necessary for a cleansing shower bath is far less.

Fourth. The cleansing is much more thorough.

Fifth. The space needed for the shower or rain bath is one-half of that required for the tub bath.

Sixth. The economy of water is enormous. The tub bath requires, according to Lassar's calculation, 200 liters of water, while for the rain bath 10 liters are ample.

Seventh. The danger of communicating disease is placed beyond the possibility of careless attendants even.

Eighth. The refreshing effect of the shower, whose temperature may be gradually reduced after the cleansing, is valuable, and prevents danger from the relaxing effects of a warm tub bath.

The Volksbad, in Vienna, which your chairman has personally visited, is situated in the center of the laboring population in the rear of a building. It has separate entrances for the sexes, and is divided into cells 80 centimeters deep and 1 meter wide, with passageways of 1 meter. There are 42 cells for males and 28 for females. In the ceiling of each cell a large shower nozzle is constructed, which is supplied with water at 95° F. Upon payment of 5 kreutzer (about 2 cents) the applicant receives a towel, an apron or mantle, a piece of soap, and the key of a closet in which he places his clothes. He turns the water on, soaps himself thoroughly, and again opens the valve of the shower, which descends with so much force that it aids the bather in the cleansing process. In five minutes he finds himself more clean than he would become in a longer period in a tub bath, the water of which must become soiled before its termination.

In addition to these advantages, the soiled water at once flows from the body upon an inclined asphalt floor into a gutter and thence into the sewer.

The next bather may now enter without previous preparation of the cell, or at least after a rapid flushing of it, because not a particle of detritus is left behind by the preceding bather.

The economy of space arising from the possibility of erecting the bath on the first or second floor of any tenement house in an inexpensive locality—in the neighborhood of some factory using steam—the economy in executive and manual labor, and the extreme facility of utilization are factors that must commend the warm shower or rain baths to health authorities and philanthropists.

The attachment of these simple baths to the public schools would be a great boon to the poor, relieve the tenement districts greatly, furnish a potent preventive of disease, and cultivate the inestimable habit of cleanliness among the young. As the school buildings are usually heated by steam, the heating of water for bathing purposes would be comparatively inexpensive.

That expenditure of money for the prevention of disease is the most profitable application of public funds has become an accepted fact in modern government. In no direction would money be more beneficially and profitably expended than in the construction of these public baths, into which the passer-by may be tempted by ease of access,

promise of comfort, and freedom from expense. A river bath in summer requires some resolution, some energy; but a warm shower bath in a well-lighted, well-ventilated, and pleasantly warm room, with facilities for drying and dressing, is a luxury that may tempt the laziest and dirtiest tramp.

The people especially who have literally "earned their bread by the sweat of their brow" should find, without outlay or trouble, in their own vicinity, a comfortable place where they may rid themselves of the filth accumulated upon their persons by their daily labor.

That the life, liberty, and property of every citizen, rich or poor, shall be protected is the chief axiom of our Government; that their health, more precious than all these, be protected, is an idea whose dawn gives promise of better and brighter days for the poor and lowly, who, owing to their helplessness, should be our special care. A tithe of the amount spent in the execution of quarantine to bar out disease, the erection of conduits to furnish pure and abundant water, the inspection of food, etc., would, if applied to the construction of public baths, enormously aid our health authorities in their important mission.

Shortly after the date of the above report and after consultation with Doctor Baruch the New York Association for Improving the Condition of the Poor constructed a large bath house embodying the features recommended. This bath, known as the People's Bath, is still in operation and has been an unqualified success from its opening. Several smaller rain or shower baths, also under the control of philanthropic associations, were constructed in New York shortly thereafter, and the movement gradually gained strength and impetus, finally resulting in municipal interest and action in a number of the cities of the country.

It is probably true that the establishment of municipal public baths was greatly retarded by the opinion, quite generally held and expressed, that houses in our cities usually contained bathrooms and that the need of public facilities of this character was not so great as in other countries. This opinion, however, was very effectually corrected by the results of several investigations which were undertaken in various cities. Doctor Rohé, of Baltimore, Md., in an address before the American Medical Association in 1887, declared that from investigations conducted in 18 cities which at that time had no free public baths it was found that less than one-fourth of the residences were equipped with bath tubs. Among these cities were Baltimore, Md.; Cincinnati, Ohio; St. Louis, Mo.; Milwaukee, Wis., and Minneapolis, Minn. It is stated in his address that "five-sixths of the inhabitants of these cities have no facilities for bathing, except such as are afforded by pail and sponge, or a river, lake, or other body of water which may be easily accessible; but in winter even such sources of cleanliness are cut off."

Later investigations, of an official character and otherwise, confirmed Doctor Rohé's statements in the most conclusive manner. The tenth-house census of Boston, conducted in 1892 by the Massachusetts

bureau of statistics of labor, revealed similar conditions in this typical modern city. It was shown that of the total number of families and individuals residing in the city, 71,665 families, comprising 311,396 individuals, lived in rented tenements. Of this number, only 18,476 families, comprising 82,716 individuals, lived in tenements which were provided with bathing facilities. It was thus shown that but 25.78 per cent of the families, or 26.56 per cent of the individuals, residing in rented tenements were supplied with bathrooms, while nearly three-fourths of this class of the population were without such conveniences. The above represented the average condition, for the whole city, of families and individuals residing in rented tenements. In certain individual wards the average conditions were very much worse. In one ward, for example, it is stated that less than 1 per cent of the population living in rented tenements had access to bathrooms, while in another the per cent of the population having such facilities was but 1.99. The conditions thus revealed surely justify the excellent provision which this city has since made for public bathing accommodations for this class of its population.

The results of a more extensive investigation, conducted by the Federal Bureau of Labor in 1893, are also of interest in this connection, showing, among other matters of deep social and economic interest, the facilities for bathing available in the most congested slum districts of Baltimore, Chicago, New York, and Philadelphia. The entire number of persons reported as living in the selected districts on April 1, 1893, the date of the investigation, was as follows: Baltimore, 18,048; Chicago, 19,748; New York, 28,996, and Philadelphia, 17,060. It is explained in the report that the districts selected contain but a portion of the whole slum population of the cities included in the investigation. An estimate of the total slum population is given as follows: Baltimore, about 25,000; Chicago, 162,000; New York, 360,000, and Philadelphia, 35,000. It should be stated that the districts selected were among the worst in these cities—the centers of the slum population.

The following summary, which shows, for the selected district in each city, the number and per cent of families and individuals who had or who had not a bathroom in the house or tenement which they occupied, is reproduced from the report:

NUMBER AND PER CENT OF FAMILIES AND INDIVIDUALS IN HOUSES OR TENEMENTS HAVING AND NOT HAVING BATHROOMS.

City.	Population of houses or tenements having bathrooms.				Population of houses or tenements not having bathrooms.			
	Number.		Per cent.		Number.		Per cent.	
	Families.	Individuals.	Families.	Individuals.	Families.	Individuals.	Families.	Individuals.
Baltimore.....	296	1,663	7.35	9.21	3,732	16,385	92.65	90.79
Chicago.....	110	748	2.83	3.79	3,771	19,000	97.17	96.21
New York.....	138	1,888	2.33	6.51	5,774	27,108	97.67	93.49
Philadelphia.....	560	3,080	16.90	18.05	2,753	13,980	83.10	81.95

The summary shows that in the selected district of Baltimore but 7.35 per cent of all families, comprising but 9.21 per cent of the total population, had bathrooms; the per cent of families and individuals not having bathrooms being respectively 92.65 per cent and 90.79 per cent. The condition in the selected district of Chicago was even worse, but 2.83 per cent of all families, comprising 3.79 per cent of all persons, having bathrooms. The worst conditions, however, were found in the selected district of New York, in which but 2.33 per cent of families had bathrooms. The Philadelphia district showed a greater proportion of families having bathrooms than any of the other cities, the per cent being 16.90.

An additional investigation, comprehending 480 houses in the selected district of New York and 378 in that of Philadelphia, was made in order to ascertain how many persons in each house were compelled to use the same bathrooms, water-closets, and privies. Out of a total of 480 houses visited for this purpose in New York, but 17 had bathrooms, while in Philadelphia, out of a total of 378 houses visited, but 67 had bathrooms. The average persons to a bathroom in the houses having bathrooms were 8.14 in New York and 7.42 in Philadelphia. The table which follows shows the details for each specified number of persons to a bathroom in each house. It should be borne in mind that these figures referred only to the houses having bathrooms, 96.67 per cent of the houses in the districts investigated in New York and 82.28 per cent in Philadelphia being entirely without such accommodations, as previously shown. It is stated that the above averages, although for but a small portion of the slum districts of the two cities, are thought to be fairly representative of the whole. The table relating to bathrooms follows:

NUMBER OF PERSONS TO A BATHROOM.

Persons to a bathroom.	Houses.	
	New York.	Philadel- phia.
1 or under 2.....		2
2 or under 3.....		2
3 or under 4.....	2	8
4 or under 5.....	3	4
5 or under 6.....	2	4
6 or under 7.....	3	6
7 or under 8.....	1	13
8 or under 9.....		10
9 or under 10.....		5
10 or under 11.....		5
11 or under 12.....	1	1
12 or under 13.....	1	2
13 or under 14.....	1	
15 or under 16.....	1	1
16 or under 17.....		2
17 or under 18.....		1
21 or under 22.....		1
24 or under 25.....	1	
110 or under 111.....	1	
Total houses.....	17	67

It is gratifying to note that each of the four cities included in the investigation of the Bureau of Labor has since provided more or less adequate facilities for public bathing.

Other investigations merely add to the evidence pointing to the almost entire absence of bathing facilities among a certain class of the inhabitants of American cities. The New York Tenement House Committee of 1894 reported concerning 255,000 inhabitants of the tenements which had been inspected under its supervision that but 306 had access to bath tubs in the houses in which they lived. An investigation in Grand Rapids, Mich., a comparatively small city, revealed the fact that but 5 per cent of its inhabitants had the use of private bath tubs. A recent report of the Philadelphia Public Baths Association states that in a typical block adjoining their public bath and washhouse at Gaskill and Lithgow streets an actual count showed that there was but one bath tub for each 155 people. In a paper read before the Contemporary Club of Davenport, Iowa, in 1901, Mr. B. F. Tillinghast stated that in that city one-half of the dwellings were without a public water supply and that less than 16 per cent of the population had access to bath tubs.

Recognizing the conditions as regards bathing facilities in their larger cities, the legislators of at least two States have enacted laws looking to the provision of public accommodations of this character. The law of Massachusetts is merely permissive, while that of New York is mandatory so far as concerns cities of over 50,000 population, and its requirements have been sustained by the supreme court.

The law of Massachusetts, first enacted in 1874, and now appearing as sections 20 and 21 of Chapter 25 of the Revised Laws of 1902, is as follows:

SECTION 20. A town which accepts the provisions of this and the following section, or has accepted the corresponding provisions of earlier laws, by a two-thirds vote at an annual meeting, may purchase or lease lands, and erect, alter, enlarge, repair and improve buildings for public baths and washhouses, either with or without open drying grounds, and may make open bathing places, provide them with the requisite furniture, fittings and conveniences, provide instruction in swimming, and may raise and appropriate money therefor.

SEC. 21. Such town may establish rates for the use of such baths and washhouses, and appoint officers therefor, and may make by-laws for the government of such officers, and authorize them to make regulations for the management thereof and for the use thereof by non-residents of said town.

The law of New York was enacted in 1895 and reads as follows:

SECTION 1. All cities of the first and second class shall establish and maintain such number of public baths as the local board of health may determine to be necessary; each bath shall be kept open not less than 14 hours each day, and both hot and cold water shall be provided.

The erection and maintenance of river or ocean baths shall not be deemed a compliance with the requirements of this section. Any city, village, or town having less than 50,000 inhabitants may establish and maintain free public baths, and any city, village, or town may loan its credit or may appropriate its funds for the purpose of establishing such free public baths.

SEC. 2. This act shall take effect immediately.

For many years summer baths have been supported by appropriations from the city treasury in a number of cities having a water frontage, while the movement for all-the-year cleansing baths has had enlisted in its support many associations of a philanthropic character, as well as a growing number of public and private citizens distinguished alike for their public spirit and benevolence. It is not a matter of special concern at this time whether this support is due to the altruistic spirit of the age; whether to a realization that the conditions of the very poor as regards facilities for securing cleanliness are a menace to the public health and public welfare, or whether to the belief that such conditions strongly tend to lessen the economic value of a large proportion of the working classes of our cities. This movement, which began with the establishment of a number of bath houses in several cities under private philanthropic control, has grown and progressed to the extent that most of the larger cities of the country are at present operating all-the-year public cleanliness baths at the public expense. That these "steps toward the public supply of positive social opportunity" have elevated the material and moral tone of the poorer classes in these cities is evident to the careful observer.

The great interest in the subject, the rapid multiplication of municipal establishments of this character, and the lack of any publication furnishing even a brief account of such establishments in the United States, suggested the desirability of preparing an exhibit illustrating municipal public baths as a part of the exhibit of the Bureau of Labor at the Louisiana Purchase Exposition. This exhibit consists of a large number of photographs illustrating their interior and exterior appearance, and numerous plans illustrating the floor plans, elevations, and construction of typical municipal public baths. A number of these photographs, plans, etc., have been reproduced and are published in connection with the description of the baths in the various cities. So far as could be ascertained these descriptions cover every city in the country which maintains institutions of this character. The final pages are devoted to a description of certain typical baths established through private philanthropy or as commercial enterprises. The description of typical baths of this description is thought to be justified, owing to their importance as illustrating, in some cases, the beginnings of the movement, and in others their usefulness in furnishing facilities not yet afforded by the city in which located.

As a result of the investigation made it has been ascertained that in 34 cities of the United States more or less adequate provision for public baths has been made by the municipality. Other cities are carefully considering the establishment of houses and in some cases, notably in St. Louis, appropriations have been made for the purpose. The following table shows the names of the cities in which municipal public baths have been established and the number, kind, equipment, cost, etc., of the baths in each. Following the statement of municipal baths in the same table will be found similar information concerning the previously mentioned typical baths operated by philanthropic associations or by individuals as private enterprises.

STATISTICS OF PUBLIC BATHS IN THE UNITED STATES.

Marginal number.	City.	Name of bath.	Number and kind of baths.	When opened.	Material of which constructed.
MUNICIPAL.					
1	Albany, N. Y.....	Municipal Bath.....	1 shower and pool.	1901	Brick and marble.
2	Baltimore, Md.....	Canton Bath.....	1 beach.....	1893	Wood.....
3	Baltimore, Md.....	Winan's Beach Bath.....	1 beach.....	1894	Wood.....
4	Baltimore, Md.....	Gwynn's Falls Bath.....	1 beach.....	1894	Wood.....
5	Baltimore, Md.....	Walters Bath No. 1.....	1 shower.....	1900	Brick and stone.
6	Baltimore, Md.....	Walters Bath No. 2.....	1 shower.....	1902	Brick and stone.
7	Boston, Mass.....	Wood Island Park Bath, Beach No. 1.....	1 beach.....	1897	Wood.....
8	Boston, Mass.....	Dewey Beach Bath, Beach No. 2.....	1 beach.....	1898	Wood.....
9	Boston, Mass.....	L Street Bath, Beach No. 3.....	1 beach.....	1866	Wood.....
10	Boston, Mass.....	Savin Hill Bath (males), Beach No. 4.....	1 beach.....	1900	Wood.....
11	Boston, Mass.....	Commercial Point Bath, Beach No. 5.....	1 beach.....	1870	Wood.....
12	Boston, Mass.....	North End Park Bath, Beach No. 6. (d).....	1 beach (d).....	1898	Brick and granite.
13	Boston, Mass.....	Spring Street Bath, Beach No. 7.....	1 beach.....	1898	Wood.....
14	Boston, Mass.....	Savin Hill Bath (both sexes).....	1 beach.....	1901	Wood.....
15	Boston, Mass.....	Municipal Floating Baths.....	12 floating.....	(f)	Wood.....
16	Boston, Mass.....	Orchard Park Bath.....	1 pool.....	1898	Wood.....
17	Boston, Mass.....	East Boston Bath, Gymnasium No. 1.....	1 shower.....	1897	Wood.....
18	Boston, Mass.....	South Boston Bath (D street), Gymnasium No. 2.....	1 shower.....	1899	Wood.....
19	Boston, Mass.....	South End Bath (Taylor street), Gymnasium No. 3.....	1 shower.....	1901	Wood.....
20	Boston, Mass.....	Harrison Avenue Bath, Gymnasium No. 4.....	1 shower.....	1900	Brick.....
21	Boston, Mass.....	Elmwood Street Bath, Gymnasium No. 5.....	1 shower.....	1900	In public building.
22	Boston, Mass.....	Charlesbank Gymnasium Bath (men).....	1 shower.....	1889	Wood.....
23	Boston, Mass.....	Charlesbank Gymnasium Bath (women).....	1 shower.....	1891	Wood.....
24	Boston, Mass.....	Wood Island Park Gymnasium Bath.....	1 shower.....	1896	Wood.....
25	Boston, Mass.....	Dover Street Bath.....	1 shower.....	1899	Brick and stone.
26	Boston, Mass.....	Cabot Street Bath.....	1 shower and pool.	(i)	Brick and stone.
27	Boston, Mass.....	North End Bath.....	1 shower.....	(i)	Brick and terra cotta.
28	Boston, Mass.....	Paul Revere School Bath.....	1 shower.....	1899	In school building.
29	Boston, Mass.....	State Bath at Revere Beach.....	1 beach.....	1897	Brick and concrete.
30	Boston, Mass.....	State Bath at Nantasket Beach.....	1 beach.....	1902	Wood.....
31	Bridgeport, Conn.....	Seaside Park Bath.....	1 beach.....	1901	Wood.....
32	Brookline, Mass.....	Municipal Bath.....	1 shower and pool.	1897	Brick and stone.
33	Brooklyn, N. Y.....	Municipal Floating Baths.....	6 floating.....	1875	Wood.....
34	Brooklyn, N. Y.....	Pitkin Avenue Bath.....	1 shower.....	1903	Brick and stone.
35	Brooklyn, N. Y.....	Hicks Street Bath.....	1 shower.....	1903	Brick and stone.
36	Buffalo, N. Y.....	Municipal Bath No. 1.....	1 shower.....	1897	Brick and stone.
37	Buffalo, N. Y.....	Municipal Bath No. 2.....	1 shower.....	1901	Stone and wood.
38	Cambridge, Mass.....	Captain's Island Beach Bath.....	1 river beach.....	1899	Wood.....
39	Chicago, Ill.....	Lincoln Park Beach Bath.....	1 beach.....	1902	Wood.....
40	Chicago, Ill.....	Twenty-fifth Street Beach Bath.....	1 beach.....	1900	Wood.....
41	Chicago, Ill.....	Seventy-ninth Street Beach Bath.....	1 beach.....	1900	Canvas tents.
42	Chicago, Ill.....	McKinley Natatorium.....	1 pool.....	1903	Granitoid.
43	Chicago, Ill.....	Carter H. Harrison Bath.....	1 shower.....	1894	Brick and stone.
44	Chicago, Ill.....	Martin B. Madden Bath.....	1 shower.....	1897	Brick, terra cotta.
45	Chicago, Ill.....	Municipal Bath No. 3.....	1 shower.....	1900	Brick and stone.

a Different hours.

b For males only.

c Separate houses.

d Here is combined a great playground, with piers, bath houses, open air gymnasium, etc., all representing a value of about \$1,000,000, including land, pier, and buildings.

e Floating pool for very small children.

f 1866 to 1897.

g Separate houses in some cases, different hours in others.

h Large room divided by curtains.

STATISTICS OF PUBLIC BATHS IN THE UNITED STATES.

Equipment.												
In service.	Show-ers.	Tubs.	Hot water.	Swimming tanks.		In-struction in swim-ming.	Dress-ing rooms.	Public laundry.	Sepa-rate baths for males and females.	Sepa-rate wait-ing rooms for males and females.	Living rooms for su-perintend-ent.	Mar-ginal num-ber.
				Num-ber.	Size (feet).							
2 year	8	2	Yes.	1	26 by 69.....	Yes..	38	No...	No(a)	No(a)	Yes..	1
summer	3	None	No..	None	.....	No...	40	No...	(b)	(b)	No...	2
summer	2	None	No..	None	.....	No...	104	No...	(b)	(b)	No...	3
summer	None	None	No..	None	.....	No...	50	No...	(b)	(b)	No...	4
1 year	23	2	Yes.	None	.....	No...	23	Yes..	Yes..	Yes..	No...	5
1 year	26	2	Yes.	None	.....	No...	26	Yes..	Yes..	Yes..	No...	6
summer	2	None	No..	None	.....	Yes..	250	No...	Yes..	(c)	No...	7
summer	2	None	No..	None	.....	Yes..	150	No...	No...	Yes..	No...	8
summer	35	None	No..	None	.....	Yes..	1,200	No...	Yes..	(c)	No...	9
summer	1	None	No..	None	.....	Yes..	1	No...	(b)	(b)	No...	10
summer	2	None	No..	None	.....	Yes..	150	No...	No...	Yes..	No...	11
summer	8	None	No..	None	.....	Yes..	600	No...	Yes..	Yes..	No...	12
summer	2	None	No..	# 1	18 by 35.....	Yes..	15	No...	No(a)	No(a)	No...	13
summer	4	None	No..	None	.....	No...	85	No...	No...	No...	No...	14
summer	None	None	No..	12	30 by 65.....	No...	216	No...	(g)	(g)	No...	15
summer	2	None	No..	1	30 by 80.....	Yes..	2	No...	No(a)	No(a)	No...	16
year	11	None	Yes.	None	.....	No...	# 1	No...	No(i)	No(i)	No...	17
1 year	18	None	Yes.	None	.....	No...	# 1	No...	No(i)	No(i)	No...	18
1 year	6	None	Yes.	None	.....	No...	# 2	No...	No(i)	No(i)	No...	19
year	6	None	Yes.	None	.....	No...	# 1	No...	No(i)	No(i)	No...	20
1 year	6	None	Yes.	None	.....	No...	# 1	No...	No(i)	No(i)	No...	21
1 year	9	None	Yes.	None	.....	No...	1	No...	(b)	(b)	No...	22
1 year	5	2	Yes.	None	.....	No...	16	No...	(k)	(k)	No...	23
summer	5	None	Yes.	None	.....	No...	1	No...	(b)	(b)	No...	24
1 year	52	9	Yes.	None	.....	No...	52	No...	Yes..	Yes..	Yes..	25
1 year	21	None	Yes.	1	25 by 75.....	(m)	(m)	(m)	No(i)	No(i)	(m)	26
1 year	67	None	Yes.	None	.....	(m)	41	(m)	No(i)	No(i)	(m)	27
(*)	13	None	Yes.	None	.....	No...	30	No...	Yes..	Yes..	No...	28
summer	20	None	No..	None	.....	No...	1,700	No...	No...	No...	No...	29
summer	8	None	No..	None	.....	No...	392	No...	No...	No...	No...	30
summer	2	2	No..	None	.....	No...	142	No...	Yes..	No...	No...	31
1 year	15	3	Yes.	1	26 by 80.....	Yes..	48	No...	No(a)	No(a)	No...	32
summer	None	None	No..	5	(m)	Yes..	300	No...	No(i)	No(i)	No...	33
1 year	90	6	Yes.	None	.....	No...	96	No...	Yes..	Yes..	No...	34
1 year	56	8	Yes.	None	.....	No...	64	No...	Yes..	Yes..	No...	35
1 year	20	# 1	Yes.	None	.....	No...	14	(p)	No(a)	No(a)	Yes..	36
1 year	30	# 1	Yes.	None	.....	No...	18	(p)	Yes..	Yes..	Yes..	37
summer	5	None	No..	None	.....	No...	48	No...	No...	(q)	No...	38
summer	2	None	No..	None	.....	No...	4	No...	Yes..	Yes..	No...	39
summer	None	None	No..	None	.....	No...	54	No...	No...	Yes..	No...	40
summer	None	None	No..	None	.....	No...	2	No...	No...	Yes..	No...	41
summer	14	None	Yes.	1	150 by 300.....	No...	206	No...	No(i)	No(i)	No...	42
1 year	34	1	Yes.	None	.....	No...	34	No...	No(i)	No(i)	Yes..	43
1 year	31	1	Yes.	None	.....	No...	31	Yes..	No(i)	No(i)	No...	44
1 year	15	1	Yes.	None	.....	No...	15	No...	No(i)	No(i)	No...	45

† Different days.

‡ Females' room divided by curtains.

§ For females only.

¶ Under construction.

■ Not reported.

■ Every school day.

○ For infants.

■ Facilities for washing and drying underclothing.

■ Separate dressing rooms.

STATISTICS OF PUBLIC BATHS IN THE UNITED STATES—Continued.

Mar- ginal num- ber.	City.	Name of bath.	Number and kind of baths.	When open- ed.	Material of which constructed.
MUNICIPAL—Con'd.					
46	Chicago, Ill.	Robert A. Waller Bath	1 shower	1901	Brick and stone.
47	Chicago, Ill.	Fourteenth Street Bath	1 shower	1900	Brick
48	Chicago, Ill.	Twenty-second Street Bath	1 shower	1898	In public build- ing.
49	Chicago, Ill.	Kosciuszko Bath	1 shower	1904	Brick, terra cotta
50	Chicago, Ill.	Douglas Park Natatorium and Gymnasium.	1 pool (b)	1896	Brick, terra cotta
51	Cleveland, Ohio	Edgewater Park Bath	1 beach	1896	Wood
52	Cleveland, Ohio	Gordon Park Bath	1 beach	1902	Wood
53	Cleveland, Ohio	Orange Street Bath	1 shower	1904	Brick and stone.
54	Detroit, Mich.	Belle Island Park Bath	1 river beach	1894	Wood
55	Hartford, Conn.	Municipal Floating Baths	2 floating	(d)	Wood
56	Hoboken, N. J.	Municipal Floating Bath	1 floating	1888	Wood
57	Holyoke, Mass.	Municipal Baths, Wards 1, 2, 4, 6.	4 pool	(g)	Wood
58	Kansas City, Mo.	Municipal Bath	1 pool	1901	Stone and cement
59	Louisville, Ky.	Municipal Bath	1 shower	1902	Brick
60	Milwaukee, Wis.	Luke Michigan Baths	3 beach	1901	Wood
61	Milwaukee, Wis.	Milwaukee River Bath	1 river beach	1902	Wood
62	Milwaukee, Wis.	West Side Natatorium	1 shower and pool.	1890	Brick (steel tank)
63	Milwaukee, Wis.	South Side Natatorium	1 shower and pool.	1895	Brick (cement tank).
64	Milwaukee, Wis.	North Side Natatorium	1 shower and pool.	1903	Brick (cement tank).
65	Minneapolis, Minn.	Lake Calhoun Bath	1 beach	1901	Wood
66	Newark, N. J.	Summer Avenue Bath	1 pool	1896	Brick
67	Newark, N. J.	Morris Avenue Bath	1 pool	1902	Brick
68	Newark, N. J.	Walnut Street Bath	1 pool	1897	Brick
69	Newton, Mass.	Municipal Baths (Charles River)	(f)	(f)	Wood
70	New York, N. Y.	Municipal Floating Baths	15 floating	(i)	Wood
71	New York, N. Y.	Rivington Street Bath	1 shower	1901	Brick
72	New York, N. Y.	East 109th Street Bath	1 shower	1904	Brick and stone.
73	New York, N. Y.	West 41st Street Bath	1 shower	1904	Brick and stone.
74	Philadelphia, Pa.	Municipal Baths	15 pool (m)	(n)	(o)
75	Portland, Me.	Municipal Bath	1 shower	1901	In public building
76	Providence, R. I.	Municipal Floating Baths	2 floating	1878	Wood
77	Rochester, N. Y.	Municipal Bath	1 shower	1899	Brick
78	St. Paul, Minn.	Harriet Island Bath	1 river beach	1900	Wood
79	Springfield, Mass.	Municipal Floating Bath	1 floating	1889	Wood
80	Syracuse, N. Y.	Municipal Bath	1 shower and pool.	1900	Wood
81	Taunton, Mass.	Municipal Floating Bath	1 floating	1895	Wood
82	Troy, N. Y.	First Street Bath	1 shower	1901	Brick
83	Utica, N. Y.	Municipal Bath	1 pool	1893	(f)
84	Washington, D. C.	Municipal Bath	(q)	(r)	Wood
85	Worcester, Mass.	Municipal Floating Bath (wo- men).	1 floating	1898	Wood
86	Worcester, Mass.	Municipal Floating Bath (men)	1 floating	1897	Wood
87	Yonkers, N. Y.	Municipal Bath No. 1	1 shower	1896	Brick and marble
88	Yonkers, N. Y.	Municipal Bath No. 2	1 shower	1898	Brick and stone.
NONMUNICIPAL.					
89	Allegheny, Pa.	Phipps Gymnasium and Bath	1 shower	1903	Brick
90	Boston, Mass.	Marine Park Bath	1 beach	1896	Wood
91	New York, N. Y.	People's Baths	1 shower	1891	Brick, terra cotta.
92	New York, N. Y.	Riverside Association Bath	1 shower	1895	Corrugated iron.
93	Philadelphia, Pa.	Gaskill Street Bath, No. 1	1 shower	1898	Brick
94	Philadelphia, Pa.	Wood Street Bath, No. 2	1 shower	1903	Brick
95	Philadelphia, Pa.	N-w Gaskill Street Bath (women)	1 shower	1903	Brick
96	Pittsburg, Pa.	Peacock Bath	1 shower and pool.	1903	Brick and stone.
97	Pittsburg, Pa.	People's Bath	1 shower	1897	Brick and stone.
98	San Francisco, Cal.	James Lick Bath	1 tub	1890	Brick and stone.
99	San Francisco, Cal.	Lurline Bath	1 pool (e)	1893	Wood

a Different days.

b Open to air.

c Separate dressing rooms.

d One opened in 1902; other not reported.

e Separate houses.

f Not reported.

g One in 1899, one in 1901, and two in 1902.

h Spring, summer, and fall.

i 1 river beach, 1 floating.

j 1898 and 1890.

k Different hours.

l First in 1870.

STATISTICS OF PUBLIC BATHS IN THE UNITED STATES—Continued.

No.	Equipment.											Marginal number.
	Show-ers.	Tubs.	Hot wa-ter.	Swimming tanks.		In-struc-tion in swim-ming.	Dress-ing rooms.	Public laun-dry.	Sepa-rate baths for males and fe-males.	Sepa-rate wait-ing rooms for males and fe-males.	Living rooms for su-per-in-tend-ent.	
				Num-ber.	Size (feet).							
car	30	1	Yes	None		No...	20	No...	No(a)	No(a)	Yes...	46
car	12	None	Yes	None		No...	12	No...	No...	No...	No...	47
car	7	None	Yes	None		No...	7	No...	No...	No...	No...	48
car	20	None	Yes	None		No...	20	No...	No(a)	No(a)	Yes...	49
car	12	None	Yes	2	55 by 120; 55 by 60.	Yes...	192	No...	Yes...	Yes...	No...	50
car	None	None	No...	None		No...	80	No...	No...	Yes...	No...	51
car	None	None	No...	None		Yes...	450	No...	No...	Yes...	No...	52
car	37	2	Yes	None		No...	37	Yes...	Yes...	Yes...	No...	53
car	None	None	No...	None		No...	123	No...	Yes...	(c)	Yes...	54
car	None	None	No...	2	28 by 48	No...	72	No...	(c)	(c)	No...	55
car	None	None	No...	1	(f)	Yes...	150	No...	No(a)	No(a)	No...	56
car	8	None	No...	1	20 by 60	(f)	132	No...	No(a)	No(a)	No...	57
car	10	None	No...	4	40 by 60	No...	40	No...	No(a)	No(a)	No...	58
car	12	2	Yes	None		No...	14	No...	Yes...	Yes...	No...	59
car	None	None	No...	None		No...	90	No...	No...	No...	No...	60
car	2	None	No...	None		No...	81	No...	Yes...	Yes...	No...	61
car	18	None	Yes	1	33 by 83½	No...	112	No...	No(a)	No(a)	Yes...	62
car	15	7	Yes	1	30 by 80	No...	56	No...	No(a)	No(a)	No...	63
car	20	6	Yes	1	27½ by 77½	No...	38	No...	No(a)	No(a)	Yes...	64
car	None	None	No...	None		No...	100	No...	No...	Yes...	No...	65
car	None	None	Yes	1	17 by 75	Yes...	33	No...	No(a)	Yes...	No...	66
car	12	None	Yes	1	28 by 50	Yes...	59	No...	No(a)	Yes...	No...	67
car	8	None	Yes	1	25 by 50	Yes...	35	No...	No(a)	Yes...	No...	68
car	None	None	No...	1	20 by 60	No...	48	No...	No(k)	No(k)	No...	69
car	None	None	No...	15	(f)	Yes...	(f)	No...	No(a)	No(a)	No...	70
car	67	10	Yes	None		No...	67	No...	Yes...	Yes...	Yes...	71
car	96	7	Yes	None		No...	103	No...	Yes...	Yes...	Yes...	72
car	96	7	Yes	None		No...	103	No...	Yes...	Yes...	No...	73
car	None	None	No...	15	50 by 100 (p)	No...	1,125	No...	No(k)	No(k)	No...	74
car	11	None	Yes	None		No...	11	No...	No(k)	No(k)	No...	75
car	None	None	No...	2	25 by 75	Yes...	20	No...	Yes...	(c)	No...	76
car	15	None	Yes	None		No...	15	No...	No(k)	No(k)	Yes...	77
car	None	None	No...	None		Yes...	(f)	No...	Yes...	Yes...	Yes...	78
car	None	None	No...	1	20 by 55	No...	36	No...	No(k)	No(k)	No...	79
car	16	20	Yes	1	36 by 96	No...	37	No...	No(k)	No(k)	Yes...	80
car	None	None	No...	1	(f)	No...	15	No...	No(k)	No(k)	No...	81
car	24	2	Yes	None		No...	24	Yes...	Yes...	Yes...	Yes...	82
car	None	None	(f)	1	(f)	(f)	100	(f)	(f)	(f)	(f)	83
car	None	None	No...	2	30 by 60; 22 by 44	Yes...	(f)	No...	Yes...	Yes...	No...	84
car	None	None	No...	1	8½ by 25	Yes...	47	No...	(s)	(s)	No...	85
car	None	None	No...	1	8x19½	Yes...	55	No...	(t)	(t)	No...	86
car	24	2	Yes	None		No...	26	No...	Yes...	Yes...	Yes...	87
car	22	2	Yes	None		No...	24	No...	Yes...	Yes...	Yes...	88
car	20	8	Yes	None		No...	28	Yes...	Yes...	Yes...	No...	89
car	32	None	Yes	None		No...	476	No...	Yes...	No...	No...	90
car	23	3	Yes	None		(f)	36	No...	Yes...	Yes...	Yes...	91
car	31	None	Yes	None		No...	31	No...	(t)	(t)	Yes...	92
car	40	4	Yes	None		No...	41	Yes...	Yes...	Yes...	Yes...	93
car	30	None	Yes	None		No...	30	No...	Yes...	Yes...	Yes...	94
car	5	5	Yes	None		No...	10	Yes...	(s)	(s)	No...	95
car	10	4	Yes	1	11½ by 26	No...	16	No...	Yes...	Yes...	No...	96
car	32	2	Yes	None		No...	34	No...	Yes...	Yes...	Yes...	97
car	None	60	Yes	None		No...	60	No...	Yes...	Yes...	Yes...	98
car	(f)	(f)	Yes	1	70 by 150	Yes...	(f)	No...	No(k)	Yes...	Yes...	99

Some open at top.

First in 1885.

Some brick and stone, some wood.

Approximate.

1 river beach, and 2 floating.

r Beach in 1891, floating baths in 1903.

s For females only.

t For males only.

u Not including Turkish and Hydratic.

v Salt water.

STATISTICS OF PUBLIC BATHS IN THE UNITED STATES.—Continued.

Marginal number.	City.	Cost or value, including betterments.			Number of baths during fiscal year.		
		Land.	Buildings.	Total.	Males.	Females.	Total.
MUNICIPAL.							
1	Albany, N. Y.	\$8,500.00	\$29,890.10	\$38,390.10	39,791	4,253	44,044
2	Baltimore, Md.	(b)	1,500.00	c 1,500.00	15,085	None.	15,085
3	Baltimore, Md.	(b)	1,800.00	c 1,800.00	23,799	None.	23,799
4	Baltimore, Md.	(d)	550.00	e 550.00	12,375	None.	12,375
5	Baltimore, Md.	3,900.00	40,000.00	43,900.00	51,211	19,894	71,105
6	Baltimore, Md.	4,000.00	23,050.00	27,050.00	45,824	6,981	52,805
7	Boston, Mass.	(g)	12,000.00	A 12,000.00	58,120	40,000	98,120
8	Boston, Mass.	(g)	10,000.00	A 10,000.00	76,950	70,078	147,028
9	Boston, Mass.	(g)	60,000.00	A 60,000.00	700,000	227,108	927,108
10	Boston, Mass.	(h)	1,000.00	c 1,000.00	25,849	None.	25,849
11	Boston, Mass.	(b)	15,000.00	c 15,000.00	20,221	20,000	40,221
12	Boston, Mass. (J) ..	(g)	55,000.00	A 55,000.00	90,092	89,000	179,092
13	Boston, Mass.	(g)	5,000.00	A 5,000.00	12,665	8,000	20,665
14	Boston, Mass.	13,500.00	2,000.00	15,500.00	39,970	34,060	74,030
15	Boston, Mass.	None.	48,000.00	48,000.00	40,000	24,000	64,000
16	Boston, Mass.	(g)	10,000.00	A 10,000.00	40,119	20,000	60,119
17	Boston, Mass.	10,000.00	25,000.00	35,000.00	42,000	28,000	70,000
18	Boston, Mass.	(g)	35,000.00	A 35,000.00	50,000	34,000	84,000
19	Boston, Mass.	(b)	(b)	(b)	25,000	11,000	36,000
20	Boston, Mass.	9,000.00	20,000.00	29,000.00	25,000	11,000	36,000
21	Boston, Mass.	(k)	(k)	(k)	25,000	7,000	32,000
22	Boston, Mass.	3,500.00	13,000.00	16,500.00	24,688	None.	24,688
23	Boston, Mass.	5,500.00	17,000.00	22,500.00	None.	1,711	1,711
24	Boston, Mass.	1,000.00	20,000.00	21,000.00	6,174	None.	6,174
25	Boston, Mass.	14,154.00	80,846.00	95,000.00	236,510	118,255	354,765
26	Boston, Mass.	(f)	(f)	100,000.00	(o)	(o)	(o)
27	Boston, Mass.	331,200.00	130,000.00	461,200.00	(o)	(o)	(o)
28	Boston, Mass.	(p)	q 1,000.00	q 1,000.00	12,500	12,500	25,000
29	Boston, Mass.	53,403.46	200,000.00	253,403.46	71,417	42,366	113,783
30	Boston, Mass.	35,000.00	50,000.00	85,000.00	13,261	9,644	22,905
31	Bridgeport, Conn.	(g)	3,430.00	A 3,430.00	(i)	(i)	* 13,500
32	Brookline, Mass.	13,000.00	48,000.00	61,000.00	37,420	17,315	54,735
33	Brooklyn, N. Y.	None.	75,000.00	75,000.00	770,000	330,000	1,100,000
34	Brooklyn, N. Y.	4,000.00	79,300.00	83,300.00	(f)	(f)	(f)
35	Brooklyn, N. Y.	2,500.00	54,564.00	57,064.00	(f)	(f)	(f)
36	Buffalo, N. Y.	6,500.00	8,300.00	14,800.00	* 74,323	* 3,352	77,675
37	Buffalo, N. Y.	2,600.00	16,365.00	18,965.00	* 97,037	* 19,938	116,975
38	Cambridge, Mass.	(g)	4,500.00	A 4,500.00	(f)	(f)	40,880
39	Chicago, Ill.	(g)	4,526.95	A 4,526.95	(f)	(f)	* 60,000
40	Chicago, Ill.	(g)	500.00	A 500.00	190,690	10,718	201,408
41	Chicago, Ill.	(g)	(r)	(r)	61,125	21,135	82,260
42	Chicago, Ill.	(g)	40,000.00	A 40,000.00	74,328	14,794	89,122
43	Chicago, Ill.	(h)	16,699.40	c 16,699.40	130,270	44,006	174,276
44	Chicago, Ill.	(h)	15,361.00	c 15,361.00	100,869	20,278	120,647
45	Chicago, Ill.	2,004.51	5,322.00	7,326.51	72,095	27,142	99,237
46	Chicago, Ill.	3,794.60	10,062.00	13,856.60	81,983	15,522	97,505
47	Chicago, Ill.	1,000.00	2,200.00	3,200.00	31,867	None.	31,867
48	Chicago, Ill.	(k)	q 1,500.00	q 1,500.00	29,460	None.	29,460
49	Chicago, Ill.	3,350.00	14,800.00	18,150.00	(f)	(f)	(f)
50	Chicago, Ill.	(g)	46,692.45	A 46,692.45	(f)	(f)	* 50,000
51	Cleveland, Ohio.	1,000.00	2,000.00	3,000.00	(f)	(f)	9,098
52	Cleveland, Ohio.	(r)	18,000.00	B 18,000.00	(f)	(f)	19,070
53	Cleveland, Ohio.	3,100.00	25,000.00	28,100.00	(f)	(f)	(f)
54	Detroit, Mich.	(g)	16,180.00	A 16,180.00	41,341	4,863	46,204
55	Hartford, Conn.	None.	8,156.00	8,156.00	46,000	36,800	82,800
56	Hoboken, N. J.	None.	11,000.00	11,000.00	37,500	7,500	45,000

a Free 3 days each week to residents.

b Leased.

c Building and equipment only; land leased.

d Rent free.

e Building and equipment only; land rent free.

f Including income from laundry.

g Public land.

h Building and equipment only; on public land.

i Not reported.

j Here is combined a great playground, with piers, bath houses, open-air gymnasium, etc., all representing a value of about \$1,000,000, including land, pier, and buildings.

k Located in public building.

l Including gymnasium.

m Free to boys and girls on Saturdays.

STATISTICS OF PUBLIC BATHS IN THE UNITED STATES.—Continued.

Charge for baths.	Number of baths during fiscal year.			Income from baths during year.	Cost of maintenance and operation during year.	Date of ending of fiscal year.	Marginal number.
	Free.	For pay.	Total.				
Nonresidents 25c., residents 10c. (a)	25,456	18,588	44,044	\$1,868.00	\$6,060.00	Dec. 31, 1902	1
Suit 5c. per hour, if furnished.	12,835	2,200	15,035	115.00	350.00	Dec. 31, 1902	2
Suit 5c. per hour, if furnished.	15,000	8,799	23,799	439.95	850.00	Dec. 31, 1902	3
Suit 5c. per hour, if furnished.	10,607	1,768	12,375	88.40	317.00	Dec. 31, 1902	4
Adults 3c., children 1c.	None.	71,105	71,105	12,397.00	6,250.00	Dec. 31, 1902	5
Adults 3c., children 1c.	None.	52,805	52,805	1,493.84	3,340.95	Mar. 31, 1903	6
Towel 1c., suit 5c., if furnished.	(i)	(i)	98,120	150.00	3,500.00	Jan. 31, 1904	7
Towel 1c., suit 5c., if furnished.	(i)	(i)	147,028	75.00	3,000.00	Jan. 31, 1904	8
Towel 1c., suit 5c., if furnished.	(i)	(i)	927,108	1,000.00	16,000.00	Jan. 31, 1904	9
Towel 1c., suit 5c., if furnished.	(i)	(i)	25,849	25.00	700.00	Jan. 31, 1904	10
Towel 1c., suit 5c., if furnished.	(i)	(i)	40,221	20.00	2,100.00	Jan. 31, 1904	11
Towel 1c., suit 5c., if furnished.	(i)	(i)	179,092	300.00	14,000.00	Jan. 31, 1904	12
Towel 1c., suit 5c., if furnished.	(i)	(i)	20,665	25.00	1,700.00	Jan. 31, 1904	13
None.	74,030	None.	74,030	None.	800.00	Jan. 31, 1903	14
Towel 1c., suit 5c., if furnished.	(i)	(i)	64,000	250.00	24,000.00	Jan. 31, 1904	15
Towel 1c., suit 5c., if furnished.	(i)	(i)	60,119	25.00	1,500.00	Jan. 31, 1904	16
Towel 1c., soap 1c., if furnished.	(i)	(i)	70,000	125.00	8,000.00	Jan. 31, 1904	17
Towel 1c., soap 1c., if furnished.	(i)	(i)	84,000	150.00	10,000.00	Jan. 31, 1904	18
Towel 1c., soap 1c., if furnished.	(i)	(i)	36,000	60.00	5,500.00	Jan. 31, 1904	19
Towel 1c., soap 1c., if furnished.	(i)	(i)	36,000	60.00	5,500.00	Jan. 31, 1904	20
Towel 1c., soap 1c., if furnished.	(i)	(i)	32,000	60.00	5,500.00	Jan. 31, 1904	21
None.	24,688	None.	24,688	None.	13,000.00	Jan. 31, 1903	22
None.	1,711	None.	1,711	None.	13,000.00	Jan. 31, 1903	23
None.	6,174	None.	6,174	None.	13,300.00	Jan. 31, 1903	24
Towel 1c., soap 1c. (m)	(i)	(i)	354,765	13,500.00	18,000.00	Jan. 31, 1903	25
(o)	(o)	(o)	(o)	(o)	(o)	(o)	26
(o)	(o)	(o)	(o)	(o)	(o)	(o)	27
None.	25,000	None.	25,000	None.	800.00	May —, 1902	28
None.	(r)	113,783	113,783	23,242.85	29,566.89	Dec. 31, 1902	29
None.	(r)	22,905	22,905	6,645.70	7,868.04	Dec. 31, 1902	30
None.	13,500	None.	13,500	None.	250.00	Dec. 31, 1902	31
5 to 25c; free at times.	9,360	45,375	54,735	6,691.00	8,198.08	Jan. 31, 1903	32
None.	1,100,000	None.	1,100,000	None.	20,969.37	Dec. 31, 1902	33
None.	(t)	None.	(t)	None.	(t)	(t)	34
None.	(t)	None.	(t)	None.	(t)	(t)	35
None.	77,675	None.	77,675	None.	1,990.13	Dec. 31, 1902	36
None.	116,975	None.	116,975	None.	4,873.29	Dec. 31, 1902	37
(u)	(i)	(i)	40,880	1,134.71	2,193.95	Nov. 30, 1903	38
Suit 5c., if furnished.	(i)	(i)	560,000	313.00	1,032.00	Dec. 31, 1903	39
None.	201,408	None.	201,408	None.	1,000.00	Dec. 31, 1903	40
None.	82,260	None.	82,260	None.	500.00	Dec. 31, 1903	41
None.	89,122	None.	89,122	None.	6,489.77	Dec. 31, 1903	42
None.	174,276	None.	174,276	None.	4,390.27	Dec. 31, 1903	43
None.	120,647	None.	120,647	None.	4,396.50	Dec. 31, 1903	44
None.	99,237	None.	99,237	None.	3,572.35	Dec. 31, 1903	45
None.	97,505	None.	97,505	None.	3,782.37	Dec. 31, 1903	46
None.	31,867	None.	31,867	None.	1,034.55	Dec. 31, 1903	47
None.	29,460	None.	29,460	None.	868.61	Dec. 31, 1903	48
None.	(t)	None.	(t)	None.	(t)	(t)	49
None.	50,000	None.	50,000	None.	4,445.72	Dec. 31, 1903	50
(w)	None.	9,088	9,088	686.15	1,035.57	Dec. 31, 1903	51
(w)	None.	19,070	19,070	1,495.65	2,132.16	Dec. 31, 1903	52
(t)	(t)	(t)	(t)	(t)	(t)	(t)	53
Locker 5c., dressing room 10c.	12,121	34,083	46,204	2,864.00	2,300.00	Dec. 31, 1902	54
None.	82,800	None.	82,800	None.	2,473.27	Dec. 31, 1901	55
None.	45,000	None.	45,000	None.	1,600.00	Dec. 31, 1902	56

■ For year ending January 31, 1904.

● Not reported; bath under construction.

♣ Located in school building.

† Equipment only.

♠ Suit, towel, and dressing room, 25c.; towel and dressing room, 20c.—children, 10c.

‡ Estimated.

§ Not reported; only recently opened.

■ When furnished, suit, towel, and locker, 10c.; suit, towel, and dressing room, 15c.; dressing room, 10c.; extra towels, 5c.

♣ Canvas tents donated; on public land.

♠ Room and towel, 5c.; room, towel, and suit, 10c.

‡ Donated.

♠ Building and equipment only; land donated.

♠ Suit and towel free.

STATISTICS OF PUBLIC BATHS IN THE UNITED STATES—Concluded.

Mar- ginal num- ber.	City.	Cost or value, including betterments.			Number of baths during fiscal year.		
		Land.	Buildings.	Total.	Males.	Females.	Total.
	MUNICIPAL—concd.						
57	Holyoke, Mass.	(a)	\$6,207.00	b \$6,207.00	30,000	10,000	40,000
58	Kansas City, Mo.	(c)	12,000.00	d 12,000.00	33,524	3,156	36,680
59	Louisville, Ky.	\$1,400.00	4,000.00	5,400.00	10,180	3,959	14,139
60	Milwaukee, Wis.	None.	2,000.00	2,000.00	(e)	(e)	(e)
61	Milwaukee, Wis.	(a)	(a)	(a)	(e)	(e)	82,000
62	Milwaukee, Wis.	4,000.00	23,136.89	27,136.89	315,380	19,790	335,170
63	Milwaukee, Wis.	6,883.00	24,363.36	31,246.36	198,838	33,617	232,455
64	Milwaukee, Wis.	5,500.00	50,000.00	55,500.00	(f)	(f)	(f)
65	Minneapolis, Minn.	(c)	3,500.00	d 3,500.00	35,000	6,000	41,000
66	Newark, N. J.	1,500.00	13,000.00	14,500.00	38,902	2,956	41,858
67	Newark, N. J.	2,500.00	18,000.00	20,500.00	29,639	3,561	33,200
68	Newark, N. J.	1,500.00	16,000.00	17,500.00	47,395	7,325	54,720
69	Newton, Mass.	(c)	700.00	d 700.00	(e)	(e)	6,727
70	New York, N. Y.	None.	(i)	(i)	(e)	(e)	5,200,000
71	New York, N. Y.	(c)	100,000.00	d 100,000.00	521,805	255,112	776,917
72	New York, N. Y.	19,000.00	108,630.00	127,630.00	(f)	(f)	(f)
73	New York, N. Y.	33,750.00	100,873.00	134,623.00	(f)	(f)	(f)
74	Philadelphia, Pa.	f 60,000.00	115,827.00	j 175,827.00	4,343,044	110,064	4,453,108
75	Portland, Me.	(c)	2,357.00	d 2,357.00	28,000	2,000	30,000
76	Providence, R. I.	None.	1,600.00	1,600.00	18,632	18,172	36,804
77	Rochester, N. Y.	10,000.00	5,500.00	15,500.00	44,500	8,500	53,000
78	St. Paul, Minn.	(k)	30,000.00	30,000.00	158,722	45,359	204,081
79	Springfield, Mass.	None.	2,000.00	2,000.00	29,350	650	30,000
80	Syracuse, N. Y.	10,000.00	2,000.00	12,000.00	o 64,587	o 3,187	p 69,667
81	Taunton, Mass.	None.	600.00	600.00	(e)	(e)	5,000
82	Troy, N. Y.	1,000.00	13,000.00	14,000.00	44,205	29,887	74,092
83	Utica, N. Y.	(e)	(e)	6,077.45	(e)	(e)	(e)
84	Washington, D. C.	(c)	12,000.00	d 12,000.00	(e)	(e)	33,496
85	Worcester, Mass.	None.	3,500.00	3,500.00	None.	11,495	11,495
86	Worcester, Mass.	None.	3,500.00	3,500.00	18,268	None.	18,268
87	Yonkers, N. Y.	2,000.00	9,350.00	11,350.00	(e)	(e)	q 19,496
88	Yonkers, N. Y.	1,200.00	9,765.00	10,965.00	(e)	(e)	q 6,673
	NONMUNICIPAL.						
89	Allegheny, Pa.	10,000.00	77,000.00	87,000.00	18,060	1,961	20,021
90	Boston, Mass.	35,000.00	20,000.00	55,000.00	18,285	7,691	25,976
91	New York, N. Y.	(a)	27,025.58	b 27,025.58	* 108,493	* 15,336	* 118,829
92	New York, N. Y.	(e)	(e)	(e)	43,809	None.	43,809
93	Philadelphia, Pa.	5,750.00	24,153.70	29,903.70	55,704	6,673	62,377
94	Philadelphia, Pa.	2,328.83	19,912.58	22,241.41	(f)	(f)	(f)
95	Philadelphia, Pa.	1,949.00	7,049.32	8,998.32	None.	(f)	(f)
96	Pittsburg, Pa.	(e)	10,000.00	10,000.00	14,612	9,615	24,227
97	Pittsburg, Pa.	20,000.00	25,000.00	45,000.00	81,665	3,900	85,565
98	San Francisco, Cal.	(e)	(e)	125,000.00	(e)	(e)	q 55,719
99	San Francisco, Cal.	(e)	(e)	(e)	(e)	(e)	(e)

a Leased.

b Building and equipment only; land leased.

c Public land.

d Building and equipment only; on public land.

e Not reported.

f Not reported; only recently opened.

g Suit, towel, and dressing room 20c., towel and dressing room 10c., children's trunks and dressing room 10c., children's trunks 5c., care of suit for season \$2, boys with their own suits, free.

h Suit, closet, and towel, 5c., if furnished; Saturdays, 10c.

i \$10,000 to \$12,000.

j Not including cost of public land on which 8 of the bath houses were built.

k Not reported; partly donated.

l Not including cost of land, not reported.

m Towel, suit, and soap 2c., if furnished; private cabinet, locker, suit, and 2 towels, 5c.

PUBLIC BATHS IN THE UNITED STATES.

1261

STATISTICS OF PUBLIC BATHS IN THE UNITED STATES—Concluded.

Charge for baths.	Number of baths during fiscal year.			Income from baths during year.	Cost of maintenance and operation during year.	Date of ending of fiscal year.	Marginal number.
	Free.	For pay.	Total.				
None	40,000	None.	40,000	None.	\$1,377.48	Dec. 31, 1902	57
Suit 5c., if furnished	32,296	4,884	36,680	\$219.20	715.50	Sept. 15, 1902	58
None	14,139	None.	14,139	None.	1,410.00	Dec. 31, 1902	59
None	(e)	None.	(e)	None.	700.00	Sept. 30, 1902	60
None	82,000	None.	82,000	None.	1,820.87	Sept. 30, 1902	61
None	335,170	None.	335,170	None.	6,000.00	Dec. 31, 1902	62
None	232,455	None.	232,455	None.	5,000.00	Dec. 31, 1902	63
None	(f)	(f)	(f)	(f)	(f)	(f)	64
(g)	(g)	(g)	41,000	593.00	800.00	Aug. 31, 1902	65
(h)	38,757	3,101	41,858	150.01	1,481.60	Dec. 31, 1902	66
(h)	29,683	3,517	33,200	175.84	1,481.60	Dec. 31, 1902	67
(h)	51,015	3,705	54,720	185.25	1,481.59	Dec. 31, 1902	68
One nominal, other free	(e)	(e)	6,727	(e)	252.15	Dec. 31, 1902	69
None	5,200,000	None.	5,200,000	None.	36,000.00	Dec. 31, 1902	70
None	776,917	None.	776,917	None.	31,000.00	Dec. 31, 1902	71
None	(f)	None.	(f)	None.	(f)	(f)	72
None	(f)	None.	(f)	None.	(f)	(f)	73
None	4,453,108	None.	4,453,108	None.	11,000.00	Dec. 31, 1902	74
None	30,000	None.	30,000	None.	1,200.00	Dec. 31, 1902	75
None	36,804	None.	36,804	None.	1,012.32	Sept. 30, 1902	76
None	53,000	None.	53,000	None.	3,000.00	Dec. 31, 1902	77
(m)	173,469	30,612	204,081	(e)	(e)	Dec. 31, 1902	78
None	30,000	None.	30,000	None.	1,000.00	Dec. 31, 1902	79
Private tub sulphur baths 25c.	67,724	1,943	69,667	185.75	3,343.94	Dec. 31, 1902	80
None	5,000	None.	5,000	None.	400.00	Nov. 30, 1902	81
None	74,092	None.	74,092	None.	1,800.00	Dec. 31, 1902	82
(e)	(e)	(e)	(e)	(e)	403.33	Dec. 31, 1902	83
Suits, children 10c., adults 15c.	(e)	(e)	33,496	537.85	2,934.40	Oct. 31, 1903	84
None	11,495	None.	11,495	None.	300.00	Oct. 31, 1902	85
None	18,268	None.	18,268	None.	300.00	Oct. 31, 1902	86
5c., including towel and soap.	(e)	19,496	19,496	974.80	(e)	Dec. 31, 1902	87
5c., including towel and soap.	(e)	6,673	6,673	333.65	(e)	Dec. 31, 1902	88
5c.	None.	20,021	20,021	1,001.05	2,000.00	(e)	89
(t)	None.	25,976	25,976	(e)	(e)	Jan. 31, 1901	90
Towel and soap 5c., if furnished.	5,795	113,034	118,829	5,637.20	5,968.41	Sept. 30, 1902	91
Towel, soap, and water 5c.	None.	43,809	43,809	2,190.45	2,428.17	Aug. —, 1903	92
Towel and soap 5c., if furnished.	3,923	58,454	62,377	3,520.20	5,002.64	Dec. 31, 1902	93
Towel and soap 5c., if furnished.	(f)	(f)	(f)	(f)	(f)	(f)	94
Towel and soap 5c., if furnished.	(f)	(f)	(f)	(f)	(f)	(f)	95
Towel and soap 5c. (v)	7,586	16,641	24,227	854.05	1,200.00	Jan. 31, 1904	96
Towel and soap 5c., if furnished.	7,566	77,999	85,565	3,959.76	2,809.72	Sept. 30, 1903	97
10c.	(e)	55,719	55,719	9,015.72	7,969.65	Dec. 31, 1902	98
(x)	None.	(e)	(e)	(e)	(e)	(e)	99

* Estimated.

o Free baths only.

p Including 1,943 pay baths; sex of bathers not reported.

q Not including free baths not reported.

r Children free.

s Eight months ending December 31, 1903.

t Men's suit and towel, 10c.; women's, 15c.; shower, 15c.; shower and suit, 20c.; higher rates for extra quality of suit.

u Not including \$150.95 income from laundry.

v For persons 12 years of age or over; under 12, free.

w Including income from invested funds.

x Tank baths—adults, 25c.; children, 15c.; tub, 30c.; Russian, tank, and shower, 50c.

MUNICIPAL BATHS.

This table furnishes a general survey of the conditions in the country at the present time. The municipal baths in existence may be classified in a general way into five types: The beach bath, the floating bath, the pool bath, the shower bath, and the combined shower and pool bath. The beach and the floating baths may be said to represent the earliest type of bath, while the shower bath represents the latest development in this direction.

Beach baths, with the simplest of accommodations, have been in existence for many years. The L Street Beach in Boston is, however, the oldest of them for which information could be secured, having been established in 1866. Boston now maintains 10 beach baths; Milwaukee, 4; Chicago, 3; Baltimore, 3, while one or two are found in Cleveland, Ohio; St. Paul and Minneapolis, Minn.; Cambridge, Mass.; Detroit, Mich., and Bridgeport, Conn. A description of a typical bath of this character will be found on pages 1278 and 1279. Where a natural beach exists, these are perhaps the least expensive of baths, inasmuch as the only provision necessary is accommodation for dressing. These dressing rooms are in many cases exceedingly simple and inexpensive, while in other cases they are elaborate and costly. The Massachusetts State beaches at Revere and Nantasket, for example, are splendidly equipped, as will be seen later on, and the cost per bath is correspondingly great, while the beach baths maintained by the city of Chicago are simple in equipment, the cost per bath being only about half a cent.

Floating baths were established by the city of Boston as early as 1866 and by the city of New York as early as 1870. Boston still maintains 12 of these houses, New York 15, and Brooklyn 5. One or two baths of this character are maintained also by Providence, R. I.; Hoboken, N. J.; Springfield, Taunton, Worcester, and Newton, Mass.; Hartford, Conn., and Washington, D. C. A description of a typical bath of this kind will be found on page 1331. Briefly, these structures consist of a platform placed upon floats, the bathing pool occupying the center of the platform, while the dressing rooms are situated around the pool. The pool itself is built in such a way as to allow the free circulation of the water through the slats or boards of which its sides and bottom are constructed. These baths may be simple and inexpensive, or, as in the case of the Boston and the New York baths, may be large and costly. The floating houses are useful only for summer bathing and can be adopted only by cities having a water frontage. During the bathing season they are moored at convenient points on the water front, while in winter they are assembled at some central point of shelter where they may undergo needed repairs. Baths of this character are especially suited to small cities which have available a river, lake, or other body of water free from

pollution. It is probable that this type of bath will gradually disappear from the larger cities, owing to the increasing difficulty of securing convenient sites and pure water. New York has already experienced great difficulty in this direction, and a number of smaller towns situated on rivers have been compelled to abolish their floating houses on account of the increasing pollution of the water.

Pool baths are of various kinds. The first established by any American city, so far as known, was constructed in 1885 by Philadelphia. That city was compelled to abolish its floating baths at that time owing to the pollution of the water, replacing them with pools in various parts of the city. It now has in operation 15 pool baths. Chicago has two elaborate baths of this character, while simpler ones are found in Holyoke (4) and Boston (1), Mass.; Newark, N. J. (3); Utica, N. Y. (1), and Kansas City, Mo. (1). The pool baths when not constructed in connection with shower baths are, so far as known, available only in warm weather. The pools or tanks are constructed of various materials and, as will be seen in the table, are of varying size. The simplest form consists of a tank surrounded by dressing rooms. In some cases the tank, as well as the dressing room, is roofed over, while in others it is without cover.

The three kinds of baths just mentioned, it will be noted, are available only in the warm season—perhaps four months in the year. While they are excellent as affording recreation and facilities for securing a degree of cleanliness, it is apparent that the best results can not be secured thereby. Hot water is essential not only to a thorough cleansing of the body, but also to render possible the giving of baths during the season when baths are most needed and when the facilities for bathing are most lacking. The tub bath, while serving a useful purpose under certain circumstances, has now been almost entirely abandoned in public baths. It is now very generally conceded that the shower or rain bath is best adapted for all public purposes. As has been stated, these baths have been in use for many years in many of the public baths in Great Britain and the continent of Europe. Their general establishment by municipalities in this country, however, began about ten years ago. Baths of this character were, indeed, established by private philanthropic enterprise some years previously through the efforts of Doctor Baruch and others, and had been introduced in the Charlesbank gymnasium baths by the city of Boston as early as 1889. If the two modern types of baths, consisting of showers alone, or showers in connection with a pool are considered together, it is seen that Milwaukee established the West Side Natatorium in 1890, Chicago opened the Carter H. Harrison Bath in 1894, while other cities followed their example during the succeeding years. At the present time 39 baths of these types are now in operation by various cities in the United States, and many more are under construc-

MUNICIPAL BATHS.

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Floating baths were established by the city of Boston in 1866 and by the city of New York as early as 1870. New York now maintains 12 of these houses, New York 12, and Brooklyn 2. Two baths of this character are maintained also by Providence, R. I.; Hoboken, N. J.; Springfield, Taunton, and Worcester, Mass.; Hartford, Conn., and Washington, D. C. A description of a bath of this kind will be found on page 1279. The structures consist of a platform placed upon piles in the water, supporting the center of the platform, while the bath is around the pool. The pool itself is built so as to insure the free circulation of the water through the bath, its sides and bottom are constructed of iron plates. This is inexpensive, or, as in the case of the land baths, may be large and costly. The floating bath is for summer bathing and can be adapted to any water frontage. During the bathing season it is convenient points on the water front, while in winter it is at some central point of shelter where it can be repaired. Baths of this character are maintained at places which have available a river, lake, or

adopted a much more inexpensive style of indoor shower bath—one of smaller capacity and of less expensive construction. Of the seven baths of this character in Chicago the largest and most expensive cost but \$18,150. A careful study of the conditions in each of the cities which have established public baths reveals the fact that, without exception, the greatest possible care was exercised that its baths, in both situation and character, should be adapted to the wants of the classes standing in greatest need of such facilities.

It is also to be inferred from the table that experiences differ in the various cities as to the desirability of furnishing baths entirely free of any expense. It is very earnestly advocated by the officials of some cities that the charge of a small fee for the use of baths, towels, soap, etc., is highly desirable as promoting a feeling of self-respect among the patrons of the houses and an appreciation of the privileges afforded. On the other hand it is claimed in other cities that bathing should be entirely free in order that none may be deprived of such privileges. After a consideration of the various opinions expressed, it is believed that municipal baths to be most effective should be either entirely free or that the fees should be so small as to render their use accessible to all classes.

The following table shows the municipal baths in the United States which furnish a service absolutely free of all expense to bathers. These are classified according to the type of bath. The table also shows the cost to the municipality of each bath furnished, the figures given being drawn from information received as to the number of bathers and the expenses of maintenance and operation during the last fiscal year for which data were available in each city.

COST OF MAINTENANCE PER BATH IN MUNICIPAL PUBLIC BATHS IN WHICH NO FEE IS CHARGED FOR BATHING PRIVILEGES.

[Arranged under each group according to date of opening.]

BEACH BATHS.

City.	Number of baths.	Name of bath.	Date of opening.	Cost per bath.
Chicago, Ill.	1	Twenty-fifth Street Beach Bath.....	1900	\$0.0050
Chicago, Ill.	1	Seventy-ninth Street Beach Bath.....	1900	.0061
Boston, Mass.	1	Savin Hill Bath (both sexes).....	1901	.0108
Bridgeport, Conn.	1	Seaside Park Bath.....	1901	.0185
Milwaukee, Wis.	3	Lake Michigan Baths.....	1901	(a)
Milwaukee, Wis.	1	Milwaukee River Bath.....	1902	.0222

FLOATING BATHS.

New York, N. Y.	15	Municipal Floating Baths.....	First, 1870	\$0.0069
Brooklyn, N. Y.	5	Municipal Floating Baths.....	1875	.0191
Providence, R. I.	2	Municipal Floating Baths.....	1878	.0275
Hoboken, N. J.	1	Municipal Floating Bath.....	1888	.0333
Springfield, Mass.	1	Municipal Floating Bath.....	1889	.0333
Taunton, Mass.	1	Municipal Floating Bath.....	1895	.0900
Worcester, Mass.	1	Municipal Floating Bath (men).....	1897	.0164
Worcester, Mass.	1	Municipal Floating Bath (women).....	1898	.0261
Hartford, Conn.	2	Municipal Floating Baths.....	Last, 1902	.0299

a Number of baths not reported.

COST OF MAINTENANCE PER BATH IN MUNICIPAL PUBLIC BATHS IN WHICH NO FEE IS CHARGED FOR BATHING PRIVILEGES—Concluded.

POOL BATHS.

City.	Number of baths.	Name of bath.	Date of opening.	Cost per bath.
Philadelphia, Pa.....	15	Municipal Baths	First, 1885	\$0.0025
Chicago, Ill.....	1	Douglas Park Natatorium and Gymnasium	1896	(a)
Holyoke, Mass.....	1	Municipal Bath (Ward 6)	1899	
Holyoke, Mass.....	1	Municipal Bath (Ward 2)	1901	.0044
Holyoke, Mass.....	2	Municipal Baths (Wards 1 and 4)	1902	
Chicago, Ill.....	1	McKinley Natatorium	1903	(a)

SHOWER BATHS.

Boston, Mass.....	1	Charlesbank Gymnasium Bath (men)	1889	(a)
Boston, Mass.....	1	Charlesbank Gymnasium Bath (women)	1891	(a)
Chicago, Ill.....	1	Carter H. Harrison Bath	1894	\$0.0232
Boston, Mass.....	1	Wood Island Park Gymnasium Bath.....	1895	(a)
Buffalo, N. Y.....	1	Municipal Bath No. 1	1897	.0256
Chicago, Ill.....	1	Martin B. Madden Bath	1897	.0364
Chicago, Ill.....	1	Twenty-second Street Bath	1898	.0295
Boston, Mass.....	1	Paul Revere School Bath	1899	.0520
Rochester, N. Y.....	1	Municipal Bath	1899	.0506
Chicago, Ill.....	1	Municipal Bath No. 3	1900	.0360
Chicago, Ill.....	1	Fourteenth Street Bath	1900	.0325
Buffalo, N. Y.....	1	Municipal Bath No. 2	1901	.0117
Chicago, Ill.....	1	Robert A. Waller Bath	1901	.0398
New York, N. Y.....	1	Rivington Street Bath	1901	.0438
Portland, Me.....	1	Municipal Bath	1901	.0400
Troy, N. Y.....	1	First Street Bath	1901	.0243
Louisville, Ky.....	1	Municipal Bath	1902	.1018
Brooklyn, N. Y.....	1	Pitkin Avenue Bath	1903	(b)
Brooklyn, N. Y.....	1	Hicks Street Bath	1903	(b)
Chicago, Ill.....	1	Kosciuszko Bath	1904	(b)
New York, N. Y.....	1	East 109th Street Bath	1904	(b)
New York, N. Y.....	1	West 41st Street Bath	1904	(b)

SHOWER AND POOL BATHS.

Milwaukee, Wis.....	1	West Side Natatorium.....	1890	\$0.0179
Milwaukee, Wis.....	1	South Side Natatorium.....	1895	.0215
Milwaukee, Wis.....	1	North Side Natatorium.....	1903	(b)

^a Cost of maintenance of gymnasium inseparably combined with that of baths.

^b In operation less than a year.

The exceedingly small cost of maintenance per bath is very clearly shown in the above table. This cost ranges from one-fourth of a cent in the 15 municipal pool baths of Philadelphia to 3 or 4 cents in the indoor shower baths in the larger cities. In a few of the smaller cities the cost runs considerably higher, this being due probably to the small number of bathers as compared with the size and equipment of the houses.

As regards the policy of furnishing baths entirely free of expense to bathers it is seen that at the floating baths in 9 cities no fee is charged for their use, while small fees are charged at such baths in 3 cities. In 3 cities all beach baths under the direct control of the municipalities are entirely free, while in 8 cities a small charge is made for the use of bathing suits, etc. In 3 cities all pool baths are

these schools. Experiments in this direction in Boston, New York, and other cities have been entirely successful, indicating as they do the fact that a large number of children can be well bathed in a comparatively short time at a merely nominal expense.

In certain cities a direct connection between the bath and the school is encouraged by locating the public bath near the school. Speaking of the Brookline (Massachusetts) Bath, Prof. D. S. Sanford, principal of the high school of that city, says:

The proximity of the bath to the playground and this high school is significant in itself. As soon as the baths were ready I made provision on my programme to have swimming during school hours, Wednesdays and Fridays. Squads were sent before and after recess. Within two months almost every boy knew how to swim. Provision was made for the girls in the afternoon, and in a surprisingly short time the girls were good swimmers.

Swimming instruction during vacation is a feature of the floating, beach, and pool baths of New York, Brooklyn, and a number of other cities, while all indoor baths which maintain a tempered pool all the year, without exception, provide for instruction of this character during the entire year.

The public laundry is a feature connected with a number of the public municipal baths. The municipal bath houses of Baltimore, Chicago, Cleveland, and Troy contain well-appointed public laundries where women may take their soiled clothes and in a comparatively short time accomplish the task of washing and ironing under the most desirable conditions. This feature has been a most unqualified success in all the institutions in which it exists, and is an especial boon to the poorer classes which are otherwise frequently compelled to perform this task under the most unfavorable and uncomfortable conditions. It will be recognized also that the cleansing of soiled clothing can be accomplished in the public laundry in a manner much more thorough than can be done with the limited facilities usually available in the houses of the poorer classes of our cities. Provision is made for the speedy accomplishment of all of the operations necessary. The washing, boiling, and rinsing is done in tubs which are provided with hot and cold water, as well as steam; the wringing is accomplished by means of centrifugal machines; the drying, by means of drying closets; and the ironing and mangling in the ironing rooms. Thorough drainage and ventilation are possible, adding greatly to the comfort and health of the workers in the laundry.

In certain of the public baths which do not contain laundries, facilities are provided for the washing and drying of the underclothing of bathers. The two public municipal baths of Buffalo, New York, contain such facilities. The equipment is much simpler than that of the *public laundry*, but the facilities offered enable bathers to wash their

underclothing and place it in the drying closet, where it is rapidly dried and ready for service by the time the bath is finished.

Many houses also contain an equipment for washing and drying the bathing suits, towels, etc., which are used in the establishment. Here again the equipment differs from that of the public laundry. Washing machines, rinsing and boiling tanks, centrifugal wringers, drying closets, and mangling machines render it possible to accomplish a great deal of work with very little expenditure of labor or time.

ALBANY, NEW YORK.

The need of providing a bathing place for people who lacked adequate facilities at their homes had been long apparent in this city before the movement leading to the establishment of the Albany public bath first assumed definite shape. For several years a floating bath had been moored along the river front at the foot of one of the principal streets, and was largely patronized during the summer months by the young men and boys of the city. This was not a free bath, however, and the fee charged for its use, though small, rendered it in large degree unavailable to many of the poorer classes. There was also the bath belonging to the Young Men's Christian Association, equipped with swimming tank, shower and tub baths, and other facilities, but its use was restricted to the membership of that organization.

Under these circumstances the erection of an absolutely free public bath, open to all persons, irrespective of sex or color, was determined upon. It soon became apparent, however, that this plan would result in an overcrowded condition of the baths at all times, and that, moreover, there were many persons who were willing to pay for the privilege of using the swimming pool without having their enjoyment curtailed by the presence of too many bathers. The question was settled by making one-half of each week free and charging a small fee for the rest of the time.

The bath (Plate 129), which was constructed in 1901, is located on the east side of Broadway between Orange and Quackenbush streets. The front of the building is of re-pressed fire-clay brick and terracotta, with an ashlar of marble. The remainder is constructed of ordinary builders' brick, metallic ceilings adding to the security against fire. A plunge bath 69 feet long and 26 feet wide has from 4 to 7½ feet of water. There are also 8 shower and 2 tub baths, with 38 dressing rooms, and a reception room in the front of the building. The baths are open during the entire year, and an abundance of hot water is provided at all times. The attendants number seven, these being appointed in strict conformity with civil-service regulations. The cost of the building and equipment, exclusive of architect's fees, was \$29,890.10. To this must be added \$8,500 paid for land, making a total cost of \$38,390.10.

The following is the schedule of hours of the baths:

Women and girls.

Monday, Wednesday, and Saturday.—Fee, 10 cents. From 9 a. m. to 12.30 p. m. Entrance until 11.30 o'clock. For women and girls over 15 years.

Tuesday and Thursday.—Free. From 9 a. m. to 12.30 p. m. Entrance until 11.30 o'clock.

Friday.—Free. From 3 p. m. to 9 p. m. Entrance until 8 p. m.

Men and boys.

Monday, Wednesday, and Saturday.—Fee, 10 cents. From 2 p. m. to 9 p. m. Entrance until 8.30 o'clock. For men and boys over 15 years.

Tuesday and Thursday.—Free. From 2 p. m. to 9 p. m. Entrance until 8.30 o'clock.

Friday.—Free. From 9 a. m. to 12.30 p. m. Entrance until 11.30 o'clock.

Instruction in swimming is given during the entire year by a corps of competent instructors.

The terms for swimming instruction are as follows:

Twelve (class) lessons	\$6.00
Individual instruction (12 lessons)	7.20
Individual instruction (less than 12 lessons), each	.75

Classes may consist of not less than three nor more than eight pupils, and in all cases must be formed by those desiring instruction.

Nonresidents are allowed the privileges of the baths on payment of a uniform rate of 25 cents.

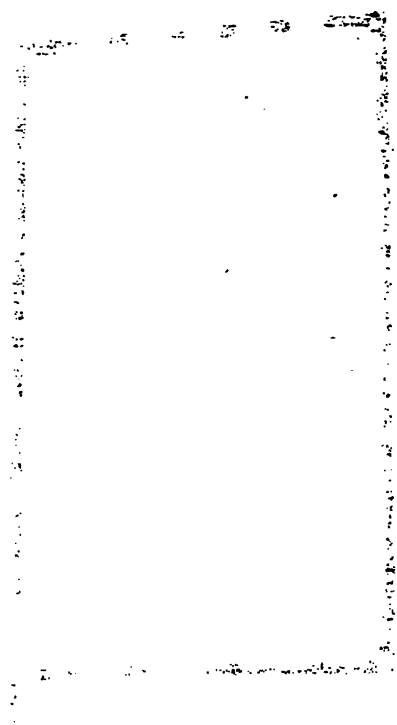
Bathing suits and towels are provided free. Persons desiring to keep their own suits and towels at the baths can do so by renting a locker and having the articles distinctly marked. They are washed, dried, and returned to the locker after being used. The fee for the use of a locker is \$1 per year.

BALTIMORE, MARYLAND.

The first attempt to establish public baths in Baltimore was made in 1893. In the summer of that year Rev. Thomas M. Beadenkoff, backed by a number of public-spirited citizens who recognized the need of better bathing facilities among the poorer classes, fitted up a bathing place on the beach at Canton, that was patronized by some 1,500 persons. In 1894 an appropriation of \$500 was made by the city and a bath commission appointed, under whose supervision 3 municipal baths were established—1 at Canton, 1 at Winan's Beach, and 1 at



PLATE 129 A—MUNICIPAL BATH, ALBANY, NEW YORK



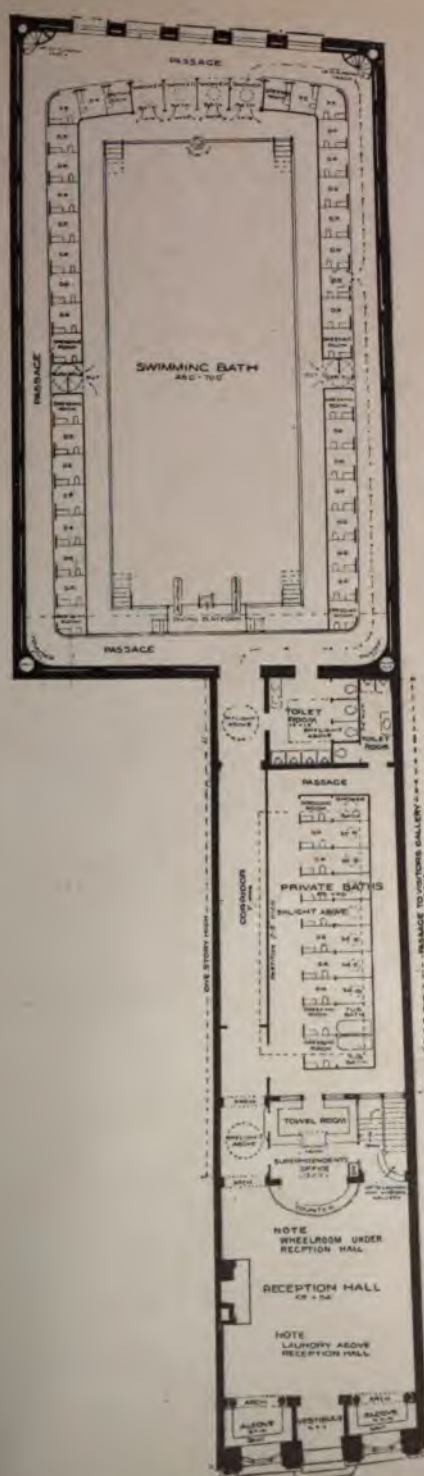


PLATE 129 D—MUNICIPAL BATH, ALBANY, NEW YORK

1

2

3

Gwynn's Falls. According to the seventh annual report of the bath commission, from which this description has been largely compiled, the patronage of these three places for the summer was 23,787.

From 1895 to 1898 the baths continued to be maintained by an annual appropriation of \$500 from the city, except for the year 1896, when they were sustained entirely by private contributions. During these years the patronage varied from 25,000 to 40,000 bathers each season.

In each of its annual reports during these years to the city council the bath commission urged that permanent baths, open all the year round, be established, and, the active coöperation of the Maryland Public Health Association having been secured, a wider public agitation in favor of such a course was begun. A public meeting was held November 27, 1898, at which Mayor Quincy, of Boston, and others spoke, illustrating the municipal baths in operation in several of the larger cities of the United States. Soon after this Mr. Henry Walters, of Baltimore, who had become greatly interested in the movement, offered to erect and equip three indoor baths at a cost of \$15,000 each, the expense of maintenance to be assumed by the city. It was found, however, that this amount was inadequate for the erection of such buildings as were desired, and the commissioners were asked to wait upon Mr. Walters and, if possible, secure his consent to the construction of two baths at an increased estimate of \$20,000 or \$25,000 each, instead of three, as originally contemplated. This was done, with the result that the gift was generously increased to \$50,000, to be used in the erection of two bath houses. The first of these was completed in May, 1900. It is located at 131 South High street, in an old and crowded part of the city, and is known as Walters's Public Bath No. 1 (Plate 130). The building occupies a lot 46 by 70 feet, and is a simple but elegant structure of brick and stone.

As stated in the report previously referred to—

Among the surrounding buildings in the neighborhood it is conspicuous by its characteristic architecture and attractive exterior. On the main floor are, first, an office and two waiting rooms, one for men and one for women. Beyond these are the bath halls, that for men containing 18 cabins equipped with shower or rain-bath appliances, where the water can be regulated to any desired temperature. Each cabin has also a dressing room attached to it. The partitions between the cabins are of Vermont slate, which furnishes a substantial dividing wall and, from a sanitary point of view, nonabsorbent and proof against infectious germs.

The capacity of the men's department, allowing each bather about twenty minutes, is 700 persons a day, and it has been frequently used to its full capacity. The women's department is similar to that for men, but smaller in size, having 5 shower baths and 2 tubs. This is in charge of a woman attendant.

In the basement of the building is a public laundry, furnished with stationary washtubs, wringers, and steam dryers, where women may bring their family washing and for a small fee have the use of all the appliances for washing, ironing, and drying.

The fees are 3 cents to adults for use of soap and towel, 1 cent for young children with parents, and 2 cents an hour for use of laundry privileges. On Saturday morning the baths are open to all school children at the nominal charge of 1 cent. Besides these there are no other charges, and the baths are thus brought within reach of all.

In 1903 this building was thoroughly remodeled and enlarged so as to double its capacity, and it is now pronounced one of the best baths of its kind to be found anywhere.

Bath No. 2 (Plate 131) was opened in 1902. It is situated on Columbia avenue and Callender alley, in the midst of a manufacturing district, where its usefulness is being amply demonstrated. It is built upon much the same plan as Bath No. 1, but includes several improvements suggested by the eighteen months' occupancy of that building.

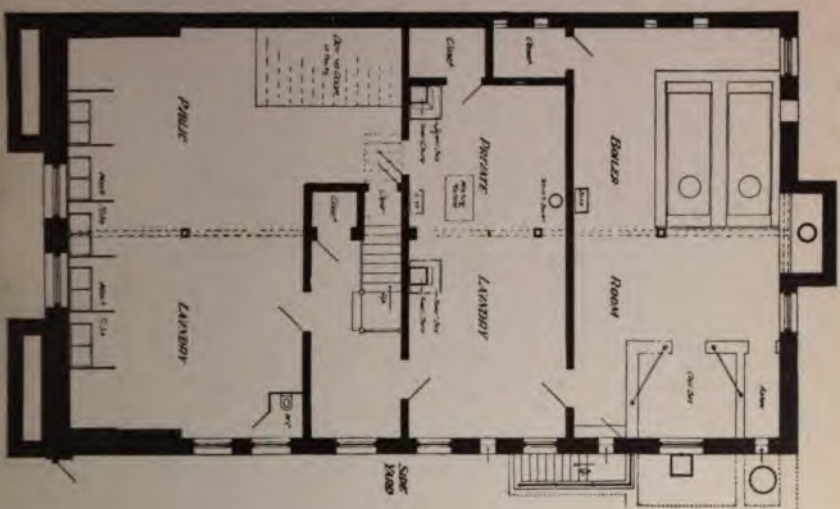
It contains 20 cabins for men, fitted with rain baths, and 6 cabins in the women's department, fitted in the same manner, with the addition of 2 tubs for those unable to use the shower. Owing to unforeseen difficulties in securing good foundations the building cost a little more than \$25,000, but the generous donor of the two baths increased his gift, so that the structure was turned over to the city, complete in every particular and ready for use, at a cost of \$27,000.

The style of architecture adopted for the building is that known as "Free Colonial." The brickwork is laid in Flemish bond, black headers, with Maryland limestone trimmings. The building measures 40 feet by 70 feet 6 inches and contains one story and a basement.

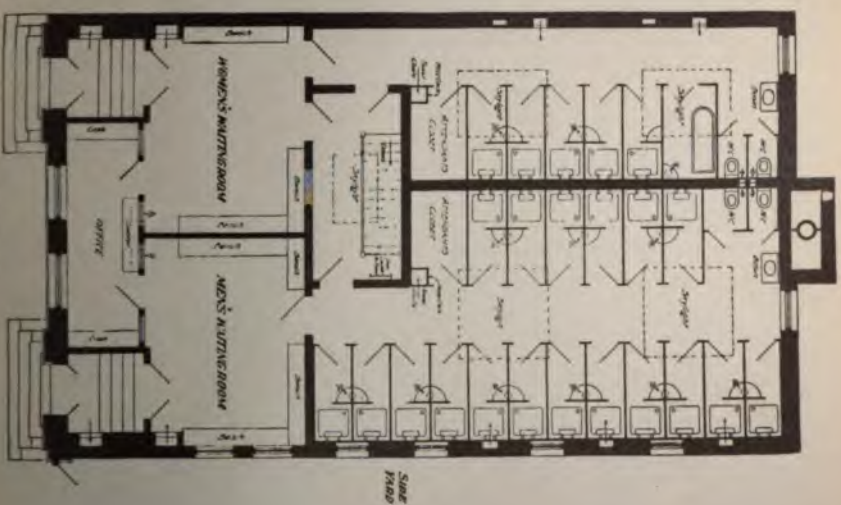
The main floor is divided into two waiting and two bath rooms—one each for men and women—with an office and a stair hall. The entrance vestibules have steps and wainscoting of McMullin gray marble and ceramic tile floors. The basement contains a large laundry and boiler room. The largest part of the laundry is for public use, and will accommodate three women at one time, each being provided with two earthenware wash trays, hot and cold water, steam wringer and steam dry-room space. The steam dry room is constructed entirely of metal and contains 20 racks. One corner is set aside for the laundry machinery for washing the towels. This consists of a 46-inch rotary washer and a 20-inch centrifugal extractor. The boiler room contains two 15-horsepower boilers, a Tobey's hot-water heater, and an 8-horsepower engine. Special attention has been given to making the building sanitary in every particular. The bath cabins have cement floors, and the partitions, seats, etc., are of Vermont green slate, with nickel-plated fittings. Each cabin contains two compartments—one for dressing and the other for bathing. The building is thoroughly ventilated by a system of ducts which gather the vitiated air to the base of a large brick vent shaft.

The baths are open every day from 8 a. m. to 8 p. m. in winter and 9 p. m. in summer, except on Sundays and holidays, when they are closed at noon.

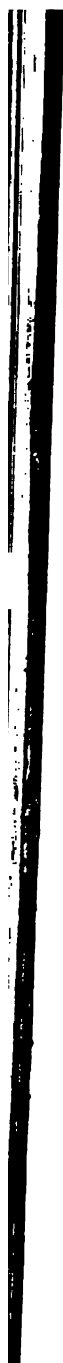
Labor Bul. 54



Basement plan



First floor plan





Public laundry



The patrons of the two baths are composed largely of three distinct classes. The predominant one is of those who live in crowded sections where bathing facilities are lacking; the second class consists of workmen who are glad of a convenient place to cleanse away the soil and grime of the day's work, while the third class is made up of the city's floating population—oyster dredgers, seafaring men, and those who drift from place to place. The gratifying increase of patronage from these three classes proves the growing usefulness of the baths.

It is worthy of note that the patronage of adults is proportionately much larger here than in some other cities, from 75 to 80 per cent of the bathers being persons of mature years.

Realizing that the popularity of the two baths now in operation is the result of conditions which call for even larger public bath accommodation, Mr. Walters has notified the city that he is ready to erect a third bath-house at a cost of \$25,000, provided the city consents to maintain and manage it as in the case of the others. The plans for this bath are now in the builder's hands, and it is expected that it will be ready for occupancy in a short time.

In recent years the bath commission has greatly improved the facilities for outdoor bathing. This was made possible by the generous provision of the city in granting sufficient money for needed betterments. At Winan's Beach a commodious new house, equipped with 104 comfortable dressing booths, has been erected, and these booths are frequently taxed to their utmost capacity to accommodate the great crowds of bathers during the heated term. At Canton Shore and at Gwynn's Falls also the beach has been cleaned and dredged and otherwise put in first-class condition. It has been recommended by the commission that additional outdoor baths be established in several of the public parks of the city, in order to meet the increasing demand for bathing facilities.

BOSTON, MASSACHUSETTS.

An excellent description of the public-bath system in operation in the city of Boston is contained in a pamphlet entitled "Free Municipal Baths in Boston," by William I. Cole, issued by the department of baths of that city in 1899. This publication, while now several years old, conveys much information of practical value, and it has been freely used in the preparation of the present description. Regarding the early history of the public-bath movement in Boston, Mr. Cole writes as follows:

As long ago as 1860 the board of aldermen and the common council of Boston appointed a joint special committee "to consider and report what measures, if any, can be adopted to provide such facilities for cheap bathing as will induce all persons to avail themselves of the means so provided." The report of this committee, submitted early

the following year, accepted and ordered to be printed, was undoubtedly the first public document in this country on the subject of municipal baths. Two questions only are considered in this report: "First, is the city of Boston deficient in bathing facilities? and, second, if so, how shall the want be met?" That it should not go at length into the general questions of the usefulness of bathing as a sanitary agency, or of its necessity to personal health and comfort, is not surprising; the investigations of science having settled the former, while every-day experience and observation proved the latter; but that it should not even raise the question whether it was in accordance with public policy to establish and maintain baths at the city's expense gives some cause for wonder, inasmuch as no undertaking of the kind had been attempted or, so far as is known, proposed by any city in the United States. Examples of municipal action in this direction had to be sought in other countries, and the report cites the public bathing establishments of England, France, and Belgium.

That Boston in those days was signally lacking in bathing facilities the report of 1861 clearly shows. So far from supplying opportunities for personal cleanliness, the city even inflicted penalties upon the boys who tried to go swimming in the public waters within its limits. At only one or two inclosed bathing houses, carried on for private profit, was the vast body of water nearly surrounding the city utilized for any such purpose. These places, of course, were available only during a part of the year, and they could never come into general use on account of the expense involved. Besides these summer baths there were a few all-the-year-round establishments, also under private management; but these were of limited capacity and necessarily made charges beyond the means of the working classes. Thus, had it not been for the water supplied their dwellings by the city water system, a large part of the population would have been destitute of the means of bodily ablutions; and the use of the city water in the contracted abodes of the poorer people is always not only inconvenient, but in numberless cases practically impossible. As a result, thousands in the community were suffering the personal discomfort and moral degradation of a want of cleanliness, and at the same time rendering themselves the more liable to disease.

To meet this real and widespread need the city, so the report urged, in the absence of any private philanthropic efforts, should initiate some plan for giving the people an opportunity for habitual and economical bathing. Its only specific recommendation was that cheap plunge baths for poor men and boys be tried for a time in different parts of the city. This easy experiment it suggested would doubtless prove of great benefit and might demonstrate the wisdom of adopting an enlarged and comprehensive plan for the good of all the citizens.

Notwithstanding the conclusions reached in the report of 1860, no action was taken by Boston in the matter of providing public bathing accommodations before 1866, the tremendous crisis through which the country was passing during the intervening years presumably precluding it. In the spring of 1866 another joint special committee was appointed to consider the feasibility of such an undertaking. This committee at once set to work with a view to securing two kinds of baths—warm and cold fresh-water baths for the fall, winter, and spring months, and salt-water baths for the summer months; but it soon found that

its immediate attention must be given to the latter, because of the great expense involved in providing the necessary apparatus and conveniences for permanent baths. On its recommendation, \$10,000 was appropriated for the establishment, under its direction, of "suitable places in south and east Boston and the city proper for salt-water bathing during the ensuing summer months." This appropriation was doubled later in the season. Six localities were selected—five for floating baths and one for a beach bath—and each was placed in the special charge of some one member of the committee. In the absence of suitable models for bathing houses the committee decided that each of its members should be free to buy or erect on the spot assigned to his care such a structure as seemed to him best adapted to the purpose in view, the aggregate cost of the buildings not to exceed the appropriation. Of the five floating baths constructed at that time the general type consisted of a low wooden building resting on a floating platform and covering a shallow tank, through the partially open sides of which the water flowed freely. A row of dressing closets ran part way around the building and was continued in a bench, above which were additional hooks for clothing. The entrance and the superintendent's office were at one end. Air and light were admitted through openings along the roof. This style of baths, with slight variations, has persisted to the present day.

The opening of these bathing places was greeted by the public with a most surprising degree of approbation, as was manifested by their use. During the first month they were visited by over 100,000 people, and the total attendance for the season of four months was not far from three and a half times that number. So great was their popularity that at the end of the season the committee reported to the city council "that there be appointed annually hereafter a joint standing committee on bathing and public water accommodations." This recommendation was readily accepted by the council and public baths became incorporated in Boston's municipal policy.

The next year six additional baths were opened by the new committee, four of them for the exclusive use of women and girls; and the number of bathers was nearly twice that of 1866. An appropriation of \$25,000 was made for this second season. Two more baths were built in 1868, and one the year following, making fifteen altogether.

In 1879 the joint standing committee was discontinued and the public baths were put in the care of the board of health. No change resulted, however, in the lines originally laid down for their management. For a long period before and after this transfer the number of bathing places remained nearly constant, and the annual expenditures varied but little from year to year.

The entrance of Mr. Josiah Quincy into the office of mayor (1896) * * * marked the beginning of a new chapter in the history of free municipal baths in Boston. Hitherto the providing of public bathing facilities by the city had been regarded as permissible in the absence of private efforts in that direction. Mayor Quincy looked upon it as but one phase of the general obligation of a city "to secure, in some measure, the enjoyment by all of at least a certain minimum of elementary social advantages." Hitherto, also, the chief, if not the sole ground on which the work was justified had been the promotion of the public health through bodily cleanliness. Mayor Quincy put it at

once on the threefold basis of health, physical development, and enjoyment, regarding the supplying of suitable means for wholesome recreation and pleasure as coming well within the lines of municipal policy. The effect of this change of attitude was at once apparent. Among the early official acts of the mayor was the appointment of a committee of citizens to select a site and secure plans for a bath house that should be open all the year round. This building was to be not only thoroughly equipped for hot and cold baths, but in its architecture and appointments it was to be of such a character as would appeal to the imagination of the people and give the whole subject of public baths a new dignity in their eyes. The baths already in existence, all of which were beach or floating baths along the water frontage of the city, were supplied with additional conveniences, such as fresh-water sprays, to increase their usefulness and make them more popular; and steps were at once taken to open additional water-side baths.

Finally, in the spring of 1898, a new city department of public baths was created, and all the baths maintained by the city were placed under its direction. This new department is administered by seven unpaid commissioners, two of whom are women, appointed by the mayor for terms ranging from one to five years. A secretary is employed by the board to act as its executive. * * *

A proposition of the first importance in connection with the subject of free popular bathing is that in a large city it should be furnished through a considerable number of establishments designed for local use, rather than by one or two on a large scale at central points. In other words, the people of a given neighborhood should not have to go too far in order to avail themselves of such facilities. If the bath is within half a mile to a mile of the home it will be readily and extensively used; if it is two or three miles away its use will be greatly restricted.

This fundamental proposition has been recognized by Boston from the outset. Thirty years ago, when the system was established, a number of baths were opened, each in a different section of the city. The site for a bath is always selected with special reference to its accessibility to the neighborhood that the bath is intended to serve. It is an interesting fact that every district of Boston, with one or two exceptions, has more or less frontage on the ocean or some river. A glance at the map showing the distribution of public baths now in operation during the summer months will make it apparent that no considerable quarter of the city is without its local bathing establishment. Some of these baths, because of their location or the conveniences that they afford, have a patronage from regions far beyond their immediate neighborhoods.

BEACH BATHS.

The bath opened on the L street beach in South Boston in 1866 was said by Sylvester Baxter to be the first free municipal bath of any kind established in the United States. Here the conformation of the shore includes a secluded bay, in which on summer days thousands of men and boys, of all sorts and social conditions, may be seen disporting in the water or lying stretched out on the sands in a state of entire nudity, it being a special traditional privilege that the use of bath-



PLATE 132—L STREET MUNICIPAL BATH, BOSTON, MASSACHUSETTS





Women's house



Boys' beach

PLATE 133—L STREET MUNICIPAL BATH, BOSTON, MASSACHUSETTS



ing suits may be dispensed with at this particular bath. By a series of high fences extending far out into the water the boys are separated from the men, while farther along the beach, at K street, is a bathing place for women and girls. Formerly a number of low sheds, with about 200 small rooms in all, were located at this spot. But in 1900 these were all removed and an ample structure, stretching 900 feet along the shore and containing 1,000 dressing rooms for men, 200 for women and girls, and hundreds of lockers for boys, was erected in their stead. This plant (Plates 132 and 133) is pronounced one of the most complete of its kind in existence and represents an outlay of \$60,000 exclusive of land. It contains three separate divisions—one for women and girls, one for men, and one for boys—and has more than justified the hopes of the bath trustees for its success. On many days in summer the attendance has run as high as 3,000 women and girls and 20,000 men and boys, all of whom received ample accommodations. The total number of bathers for the season of 1903 was 927,108, of whom 700,000 were males and 227,108 females. Each section of the beach is patrolled by expert swimmers in boats, who are constantly on the alert for possible accidents. Thirty-six men and 11 women attendants are employed and regular instruction in swimming is provided. The recent dredging of the beach so as to make swimming possible at all hours of the day has greatly increased the usefulness of this bathing place. At this beach bathing is indulged in throughout the year. It is stated that there are fully 300 regular winter bathers.

The bath located at North End Park, opened in 1898, ranks next in point of popularity.

This affords a greater variety of attractions. A flat-roofed, solidly constructed building runs along the westerly side of the park and contains the dressing quarters for men and boys. The top of this structure was designed originally to serve as an elevated walk conducting to the upper deck of a great promenade pier that bounds the park at the harbor line and incloses a little cove that makes in from the harbor. At present, however, the second deck of the pier is reached by steps leading up from the ground. Across the cove, on the easterly side of the park, is a bath house for women and girls, so that bathing in the open cove is permitted to both sexes at the same time, the accommodations being entirely separate. Another pier borders the easterly side of the park, a channel between the two piers connecting the cove with the harbor. The shore of the cove forms a beach where hundreds of children play in the sand. * * *

While the North End beach, like the L street bath, attracts people from all parts of Boston and vicinity, the greater proportion of its vast throngs come from the densely crowded tenements of the North End. A more cosmopolitan assemblage than gathers here it would be difficult to find. Every country of Europe is represented, and no less than fifteen languages are to be heard. Five thousand bathers in a single day, besides a multitude of spectators, is not an uncommon number.

This bath is described in the report of the bath department for the year 1901-2, as follows:

This great property is situated in the most thickly settled portion of the city and covers about 6 acres of ground. It was formerly a series of wharves, but as now arranged it becomes a magnificent property for the purpose designed. It combines a playground, open-air gymnasium, swimming beach for both sexes, and two recreation piers. Accommodations here are excellent for bathing, as there are about 300 closets for men and many hundred lockers for boys. There are on the women's side about 300 rooms for use of the women and girls. There are shower baths, toilet rooms, shelter tents, sand boxes, floating platforms, boats, life lines, and a floating boom all around the bathing bay to keep off debris from the river. The entire plant is approximately worth \$1,000,000, and it is probably one of the most valuable pieces of property owned by the municipality for the free use of its people.

At this beach is located one of the laundries for washing towels and suits for all the baths under the control of the department. This laundry affords employment to 2 men and 12 women during the bathing season, while 21 men and 11 women are required in the management of the baths.

Another very popular bath is the one located on the beach at Wood Island Park, East Boston. This beach was in charge of the park department until 1898, when it was placed under the control of the bath trustees, who have since greatly added to its bathing facilities. These now consist of some 150 closets for men and 100 for women, besides a separate house for boys. There is also a central building for the use of officers which is furnished with ample toilet accommodations for bathers. The cost of the buildings and equipment was about \$12,000. Seven men and 4 women attendants are employed. The total number of bathers during the summer of 1903 was 98,120, of whom about 40 per cent were women and girls. The cost of maintenance for the year was \$3,500, and the revenue from rent of suits and towels was \$150. About 3,000 persons per day can be cared for at this bath.

Dewey Beach, Charlestown, was opened as a bathing place as early as 1868, but no houses or other accommodations for the use of bathers were provided until 1898. Its facilities are about equal to those of Wood Island Park and consist of four frame houses, formerly election booths, with runways, shower baths, toilet rooms, etc. There are about 150 dressing rooms and an equal number of lockers. The attendants number 10, of whom 7 are men and 3 are women. In 1903 this bath was used by 76,950 males and 70,078 females, at a cost to the city of \$3,000. The value of the entire property, exclusive of land, is about \$10,000.

At Commercial Point, in Dorchester, are found three wooden structures fitted up with shower baths, closets, lockers, etc., for the use of

bathers. Four men and three women attendants are employed. The beach is owned by private parties and is leased from year to year at a small rental. The attendance here in 1903 was 40,221, about equally divided between males and females. The cost of the buildings, with their equipment, was about \$15,000. The capacity of this bath is about 1,500 persons per day.

Another bath located on leased ground is the one for men and boys at Savin Hill Beach, Dorchester. Here a small portion of the beach is hired each year, and a portable wooden building, containing a single large room fitted with some 300 lockers and a shower bath, is in use during the summer months. Two men are employed to assist bathers and look after the bath property. About 1,000 baths per day can be given at this establishment. The total number for 1903 amounted to 25,849. The value of this plant, including supplies, tools, boat, platform, etc., is about \$1,000.

Near this bath is one under the control of the park department, which takes care of both sexes. This house is equipped with 85 dressing rooms and 4 showers, and cost, exclusive of land, \$2,000. The number of persons using this bath in 1903 was 74,030, of whom 39,970 were males and 34,060 females.

Spring Street Beach, in West Roxbury, has two wooden houses, with platforms, runways, toilet and dressing rooms, shower baths, rafts, lockers, and a floating pool 18 by 35 feet in size, where very small children may learn to swim. The houses were formerly election booths that were transferred to the department and, with their equipment, are valued at \$5,000. In the summer of 1903 baths were given to 12,665 males and 8,000 females, the cost of maintenance being \$1,700. Three men and three women attendants are employed at this bath.

In the equipment and management of Boston's free municipal baths a special point is made of securing the patron's comfort and safety as well as enjoyment. Seats are provided for bathers and friends, ice water is at hand for the thirsty, and at two or three of the larger places bicycles can be checked without charge. At the North End beach a large awning tent affords shelter from the sun. To meet certain slight emergencies that may arise, surgical cases are provided, containing among other things liniment for bruises, Jamaica ginger to be given in case of cramp, ammonia to restore from fainting, and bandages for cuts and sprains; and the attendants are instructed in the use of these simple remedies and appliances. As a safeguard against accident by drowning at the beaches, trained life savers in boats keep constantly near the bathers both to render any needed assistance and to prevent the swimmers from venturing out too far. Other attendants also patrol the shore, ready to plunge into the water at a moment's notice to bring a helpless bather to land. Stretchers are at hand to be used in cases of need, and certain employees have been trained to resuscitate the apparently drowned. To these and other similar precautions must be due in a large measure the almost complete exemption of the

baths from serious accidents of any kind. Fatalities are practically unknown. * * *

Courtesy to all comers on the part of the employees at all times and under all circumstances is strenuously insisted upon by the department. The general direction to superintendents and assistants is: "Regard as your guest everyone who comes, and treat him as such." To make patrons of the baths feel still more at home, attendants are taken, as far as practicable, from the neighborhood of the bath house where they are to serve. At the North End beach the leading nationalities of the bathers are represented among the employees. Those who have been a long time in the service know by name hundreds of the bathers, and in not a few cases are in friendly personal relations with them.

From the first the actual use of Boston's municipal baths has been absolutely free to the people. A fee of 5 cents is charged to adults for the use of bathing suits. * * * Children's suits may be had at all the baths without charge. One cent is the price for a towel everywhere. Bathers are permitted to bring their own suits and towels if they care to do so.

FLOATING BATHS.

The twelve floating baths now maintained by the city under the supervision of the department of baths are described by the secretary, Mr. Charles F. Morse, as follows:

These houses are all of the same general type, with an oblong tank built of open slat work, so as to permit a free passage of the water. They are floated with empty casks, and rise and fall with the tide.

When a house is located close to a bridge, the tank is roofed over to prevent the throwing of objects into the water by passers-by; otherwise the tank is left open for sun and air.

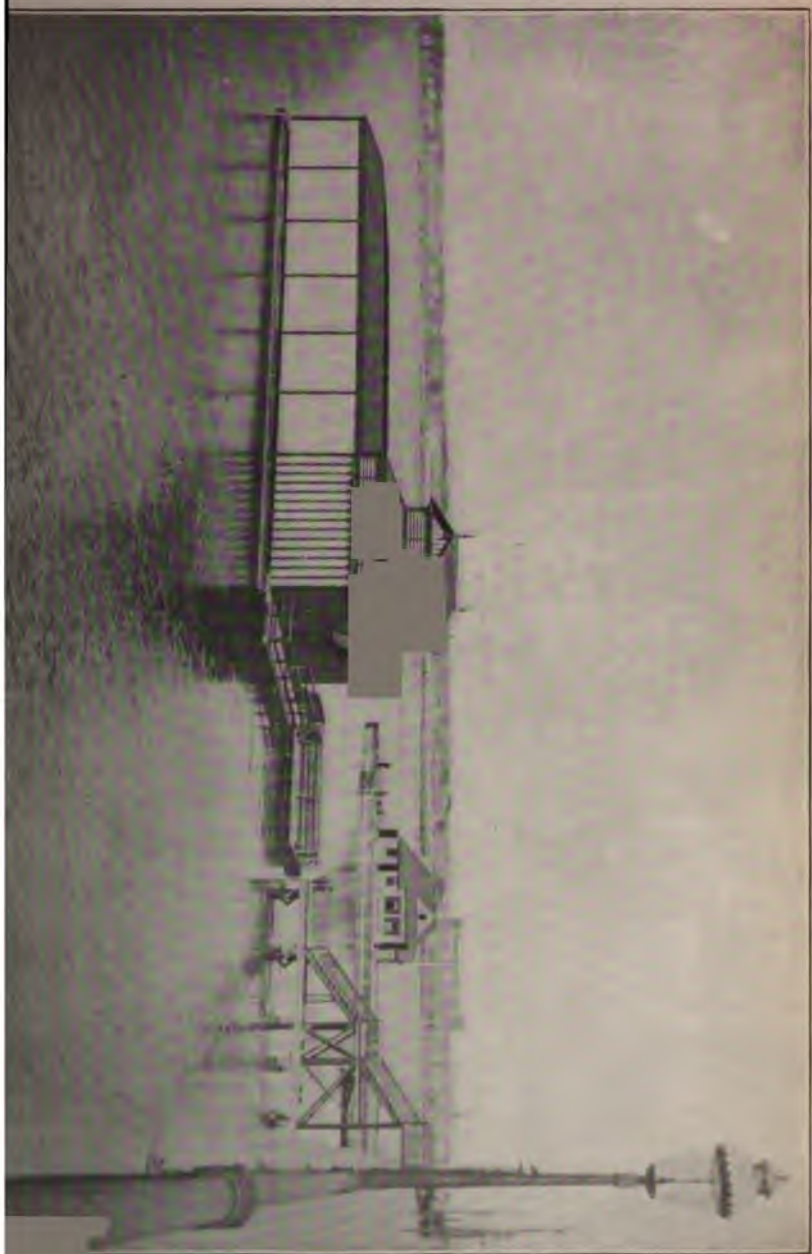
The house is connected by a long runway to the wharf. The lower end of the runway is on wheels and moves backward and forward as the tide serves.

The cost of these houses is about \$50 per foot when over 60 feet long. Thus, a 60-foot house costs about \$3,000, a 70-foot house \$3,500, and a 100-foot house \$5,000.

The maintenance is very economical. They are open from 6 a. m. to 10 p. m. in all about sixteen hours. They require but two attendants. In some cases where very large crowds attend, three men are employed, the third to watch the tank and prevent accidents. During women's hours there are two or three matrons employed. The supplies are simple, consisting of plenty of towels, bathing suits, some half dozen lamps, with good reflectors, brooms, pails, hatchet, and some paints and brushes.

The attendants are all mechanics, and during the winter are employed in building or repairing these houses; thus they are able to keep up the appearance of their houses in the summer time.

The capacity of the houses is in general about 1,000 per day; a few houses take care of about 2,000 bathers. The general plan is to have rooms for men, women, and girls, boys usually hanging their clothes on the open hooks. Those who wish towels can hire them for 1 cent each, while a bathing suit can be had for 5 cents. If they bring their own articles there is no charge. The rule is, first come first served,





and no favoritism. Early the trustees learned that the only rule worth anything in the management of the various houses was to have the attendants insist on the patrons acting like ladies and gentlemen at all times. Every courtesy is offered to those coming to use the baths, and perfect freedom within reason and decency.

The attendants are selected for their ability and common sense. The results prove the wisdom of the view taken.

There are three houses exclusively for women and one exclusively for men, the rest being open at different hours for both sexes. Men, women, and girls must wear bathing suits, but boys may bathe without suits in all the floating houses.

In October the houses are towed to the wharf in East Boston, and repaired, overhauled, and refitted for the next season. In May they are towed to their locations. They are open from June 15 to September 15.

Of these baths, three are located in East Boston, four in Charlestown, four in the city proper, and one at Brighton. Mr. Cole states that—

They differ one from another in the class of patronage they receive. The two^(a) on West Boston Bridge, for instance, are visited by numbers of Negroes from the large colored colony in the vicinity of Cambridge and the lower part of Joy streets. Those on Craigie and Warren bridges are the resorts, the one of the Jews from the Jewish quarter of the West End, the other of the Jews and Italians from the North End. At Craigie Bridge the Jews constitute about one-third of the entire attendance. Many Italian mothers come to the women's bath on Warren Bridge to wash and dress their infants. Dover Street Bridge bath has a patronage almost wholly Irish in character, on account of its nearness to the great Irish districts of the South End and South Boston. All of these baths, situated as they are on thoroughfares between the city proper and great outlying working-class quarters, are visited by very many laborers on their way to or from their places of work, not a few stopping habitually for a dip. A total attendance of 1,000 during the day is not unusual at any one of them.

In 1898 one of the older houses was abandoned and a new one of an improved type built, at a cost of \$4,000 (Plate 134). This was first located at Harvard Bridge, but owing to the greater needs at West End, it was later placed at the West Boston Bridge. This structure is provided with an open roof, which insures perfect ventilation and greatly facilitates the drying of the floors and walls. Instead of small individual closets, the building is fitted with a number of lockers arranged around the sides of a large room, this method being regarded as far better for men and boys than the old plan.

During the fiscal year ending January 31, 1904, a total of 64,000 baths were given at these twelve establishments. Of this number, 40,000 were given to males and 24,000 to females. The income from the rent of suits and towels for this period was \$250, while \$24,000 was expended for maintenance and operation.

^aOne of these houses has since been removed.

SWIMMING POOLS.

Concerning these Mr. Cole says:

The swimming pools were established to supply summer baths to the sections of the city without water frontage. One of the pools is at Orchard Park, a small open space with grass and trees in the middle of the tenement district of Roxbury. It consists of a tank made of concrete, 80 feet in length by 30 feet in width and 4 feet in depth, to which fresh water is supplied from the city pipes. This tank is inclosed merely by a high board fence. Two polling booths temporarily fitted up for the purpose afford the necessary dressing accommodations. Great care is taken to keep the water clean; the surface is drawn off several times daily, and once each day the tank is completely emptied and washed out. Every bather before entering the pool must use the shower bath. Between 80,000 and 90,000 gallons of water are used daily. This bath is the especial delight of children, who crowd to it in hundreds. But it is patronized also by a good number of adults, especially in the evening. As in the case of the floating baths used by both sexes, but not having separate accommodations for each, the bathing hours are divided between men and boys, women and girls.

The attendance here during the summer of 1903 was 40,119 males and 20,000 females. The cost of maintenance was \$1,500, while only \$25 was realized from the rent of suits and towels. Four men and three women attendants are employed. The value of this bath is about \$10,000, exclusive of land.

The other swimming pool, located on Cabot street, has been replaced by a complete plant, including a gymnasium, pool, and shower baths, which, however, is not quite completed.

GYMNASIA.

There are five gymnasia under the supervision of the bath department where hot and cold shower baths may be obtained the year round. The East Boston gymnasium is located in a building formerly used as a skating rink. A number of years ago it was purchased by Mrs. Daniel Ahl, was enlarged and equipped as a combined gymnasium and bath, and turned over to the East Boston Athletic Association for the use of its members. In 1897 it was presented to the city and thrown open to the general public. In 1898, by ordinance, its care was transferred from the park department to the bath department.

The gymnasium has a floor space 112 feet in length by 70 feet in width, and is well supplied with gymnastic apparatus. Locker and dressing-room space is found both upstairs and downstairs. There are about 600 lockers and 15 shower baths. Two days a week the entire building is reserved for the exclusive use of women and girls. On these days the baths are separated one from the other by rubber curtains.

This is an old building which will soon be replaced by a modern plant costing not less than \$100,000. It has a capacity of 1,000 per day, and at all times its facilities are severely taxed. The number of bathers during the twelve months ending with January 31, 1904, was 70,000, there being 42,000 males and 28,000 females.

The South Boston (D street) gymnasium (Plate 135) is located on cleared land containing about $5\frac{1}{2}$ acres, under the control of the city but owned by the Commonwealth, which will soon be laid out with separate athletic fields for men and women. The structure itself is of wood, 75 by 100 feet, in the English gothic style of architecture. The bath-room occupies a space of 20 by 13 feet, including 18 shower baths and a large number of lockers. A swimming tank under a separate roof was a part of the original plan and in time will be added.

This plant was the first to be built by the city especially for use as a gymnasium and was tried as an experiment to ascertain the needs of the city in this direction. Its success has led to the opening of three smaller gymnasia in Wards 7, 8, and 19, and to the appropriation of large sums for other gymnasia in other parts of the city. This building was erected, under a special appropriation, for \$28,000 and fitted up with showers, apparatus, etc., at a cost of \$5,000. The boiler house cost about \$2,000.

This gymnasium is patronized by a large number of girls working in factories, stores, and offices, who exhibit a deep interest in the gymnasium work. The attendance here in 1903 was 50,000 males and 34,000 females.

The Tyler street gymnasium was originally provided by the College Settlement Association as part of the work of Denison House, but has now been leased for a term of ten years by the city. The floor space is 62 feet in length and 37 in width; the locker and dressing-room space downstairs for men and women is 34 feet in width by 37 feet in length; the locker and dressing-room space upstairs, for women only, is 30 feet in length by 18 in width, including 200 lockers and 6 shower baths.

The gymnasium at the corner of Harrison avenue and Plympton street, in Ward 9, was fitted up at a cost of about \$20,000. It has a floor space of 58 feet in length and 36 feet in width. Its apparatus is the same as that at the Tyler street gymnasium and it accommodates the same number of people.

The Ward 19 gymnasium, on Elmwood street, Roxbury, is located in one of the ward rooms and is so arranged that the apparatus can be quickly removed when the room is needed for other purposes. The locker and dressing-room space for men and women is 17 feet in length by 15 feet in width, including about 200 lockers and 6 shower baths. The cost to fit it up was about \$5,000.

In addition to these, there are three gymnasia under the control of

the park department—one at Wood Island Park for men only and two at Charlesbank for males and females, respectively. The first of these, which is open only during the summer months, contains 5 showers and a large room fitted with 170 lockers. The building and equipment is valued at \$20,000 and the land at \$1,000. The number of bathers in 1902 was 6,174.

The Charlesbank gymnasium for men was opened in 1889. It is a wooden structure, costing, with equipment, \$13,000, and containing 9 shower baths and 196 lockers. The baths are open all the year round and are provided with hot and cold water. The number of baths given during the fiscal year ending January 31, 1903, was 24,688, and the cost of maintenance \$3,000, including the expenses of the gymnasium.

The Charlesbank women's gymnasium was opened in 1891 and cost \$22,500, including \$5,500 paid for land. It is equipped with 5 shower and 2 tub baths, and contains 16 dressing compartments in addition to a general room fitted with 124 lockers. The gymnasium and baths are open all the year round, hot water being provided at all times. This gymnasium, though supported by the city, is under the direction of the Massachusetts Emergency and Hygiene Association, and its bathing facilities are not open to the general public, but only to those who join the various gymnasium classes, the bathing being merely incidental to the gymnastic instruction. The number of women thus using the baths during the twelve months ending with January 31, 1903, was 1,711. The cost of maintaining the two gymnasiums is the same in each case, they being entirely distinct and having separate staffs.

Concerning the practical good being accomplished by these various gymnasium baths, Superintendent John W. Bowler, in his report for 1900-1901, states that—

A large number have become accustomed to bathe frequently who infrequently took a bath before the opening of the gymnasia, especially the children. At first a large number of girls would not take a bath after exercising. In questioning them it was learned that they refrained from so doing through the advice of their parents, who, due to ignorance of the subject, were positive it meant at least a cold. This feeling has been to a large extent eliminated, and through constant advice and assurance they now look upon the bath as a necessary adjunct to the exercises.

DOVER STREET BATH.

Regarding this bath Mr. Cole says:

In the planning and construction of the Dover street bath the aim was to provide such a bathing establishment as would not only be in keeping with the dignity of the city, but would constitute a worthy center for the proposed system of all-the-year-round baths. * * *



PLATE 135—D STREET MUNICIPAL GYMNASIUM AND BATH, BOSTON, MASSACHUSETTS

1

2





Shower baths



Its location was admirably chosen for the purpose in view. Dover street, on which it faces, is a part of a thoroughfare crossing the city east and west from one extreme end to the other, and bisecting that district of the south end which is rapidly becoming the great metropolitan poor quarter of greater Boston. Washington street and Harrison avenue, also great highways of travel running north and south, pass, one within two blocks of the bath house, the other within a single block. Thus multitudes of people from all parts of the city and outlying districts are brought daily into its neighborhood.

The building is a simple but imposing structure 43 feet wide by 110 feet deep (Plate 136). The front, which is three stories in height, is constructed of granite up to the second story, and of gray, mottled brick with limestone trimmings from this up to the ornamental cornice of the roof. There are two entrances, one for men and one for women. Above these a row of three arched windows extends across the second story. On the first floor are separate waiting rooms for men and women, together with the laundry and engine room in the rear. On the second floor are separate bathrooms for men and women. The third floor in the front part of the building contains an apartment for the manager of the baths and his family. The interior of the waiting rooms and bathing apartments have a high wainscoting of Knoxville marble, and the partitions of the baths are of the same material. The floors are of terrazzo mosaic. * * *

All the baths are inclosed. Each shower cabin contains a dressing alcove with seat. A Gegenstrom apparatus is used, which permits the bather to regulate the temperature of the water to suit himself. Both bathing apartments have toilet rooms connected with them. The steam supply for all purposes is furnished from the boiler room of the fire department repair shop, situated just at the rear of the bath house lot.

This bath is equipped with 52 showers—37 for men and 15 for women—besides a number of tub baths divided between the two sexes. About 500 women and girls and 1,500 men and boys can be cared for each day. The only charge made is 1 cent for a piece of soap and 1 cent for use of a towel. On Saturdays all boys and girls are supplied with these articles free of cost. A superintendent, who lives on the premises, and six men and five women attendants are employed. The bathing suits and towels used at all the other establishments under the control of the bath department are washed and thoroughly disinfected at this place. There are 10 women and 3 men employed in the laundry during the summer and 3 men and 2 women during the winter. The bath is open from 10 o'clock a. m. to 10 o'clock p. m. every day in the year, Sundays included. The attendance for the fiscal year ending January 31, 1903, was 236,510 males and 118,255 females. The cost of maintenance for the year ending January 31, 1904, was about \$18,000, and the receipts \$3,500. The total value of this property, including land, is \$95,000.

CABOT STREET BATH.

A new building is now in course of erection on the site of the old Cabot street pool, in Ward 18, which is to be one of the most complete of its kind in existence, combining all the features of a gymnasium, swimming pool, and shower-bath house, and costing not less than \$100,000. This structure measures 58 feet in width by 130 feet in length, and contains two full stories in front, with a mezzanine floor extending through the rear portion. The building is classical in style and is constructed of the best selected buff brick, with granite and terra cotta trimmings (Plates 137 and 138).

The following description is taken from the *Boston Herald* of February 13, 1903:

The visitor first enters the main waiting room from Cabot street. Immediately in front of the entrance is the office of the superintendent. Around the room against the wall are substantial wooden benches, designed to form a part of the ornamentation, with the wainscoting of the room as the back of the benches. At one end of the room rises the main staircase, of iron and marble construction. This is a very handsome feature of the entrance hall, which leads to the dressing rooms and the gymnasium. From the main hall three other staircases lead, one to the basement under the main entrance, where the heating and ventilating plant will be located, and the hot-water tanks, which will supply the various shower baths, will also be placed. A second staircase leads to the visitors' gallery overlooking the swimming pool. A third staircase leads to the intermediate floor, which contains the lockers, showers, and women's dressing rooms. There is also a short flight of stairs leading to the level of the swimming tank and the dressing rooms for those entering the pool.

All about the pool are large windows for light and air. Besides this there will be large exhaust ventilators about the great room. This room is 33 feet wide by 85 feet long and nearly 25 feet in height, and there is thus on one side of the room plenty of space for the two floors containing the showers, lockers, and dressing rooms.

The main reception room or office is kept up above the sidewalk on Cabot street, this level being about nine feet above the tank level, thus leaving good space underneath the main reception room for the boilers, etc. As the office is midway between the dressing rooms, and arranged with a narrow flight of stairs from which the superintendent may overlook the tank, the entrance, the dressing rooms, and still higher up the stairs the gymnasium, the economy of the management or maintenance of the building is at once apparent.

The whole management of the different departments remains practically under control from the office, where during men's and boys' hours the superintendent, and during the hours for women and girls the matron, will be in charge.

The swimming pool is 25 feet wide by 75 feet long, and has a walk all around 4 feet wide and of marble. The edge of the pool is of marble, slightly curved, and at intervals of 10 feet are placed large overflow openings, to be used, as well, as cuspidors, by the bathers, and also to take off the surface of the water when the pool is being filled. The supply to the tank will be from a 24-inch main run from the

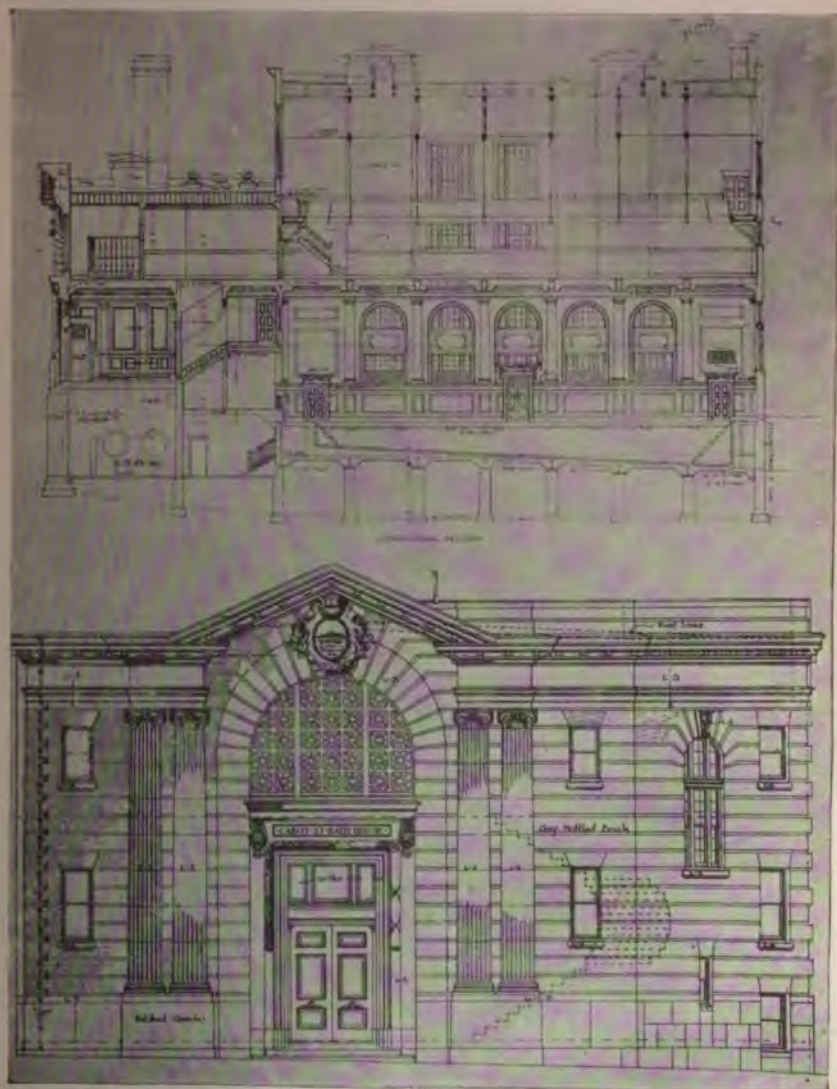


PLATE 137—CABOT STREET MUNICIPAL BATH, BOSTON, MASSACHUSETTS

1871

1872



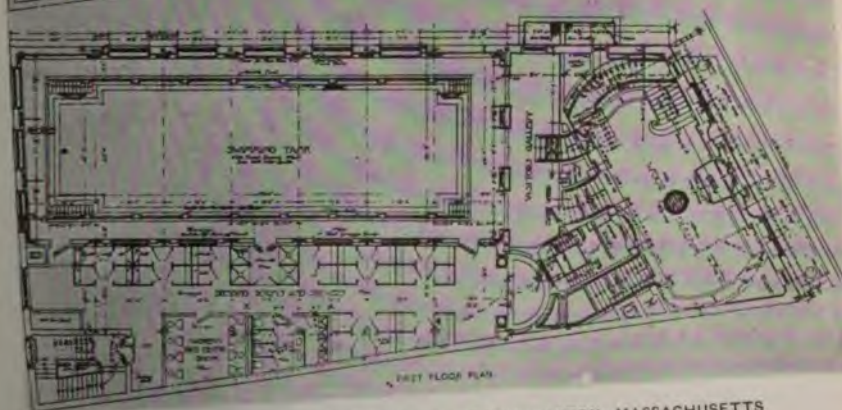
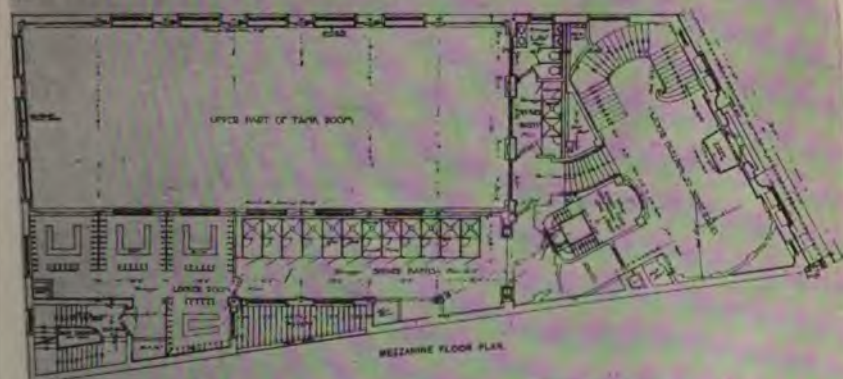
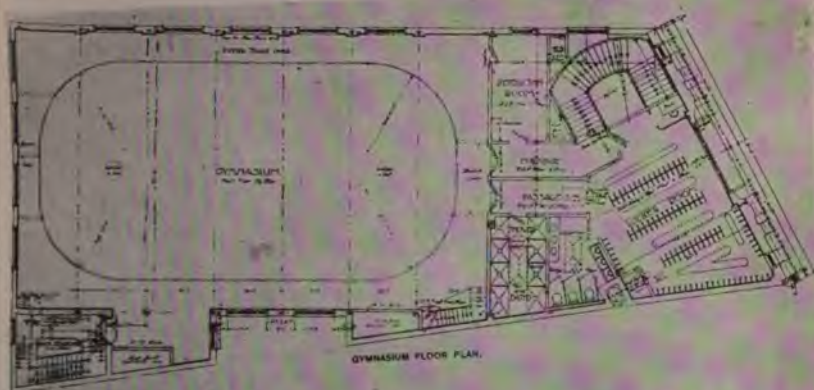


PLATE 138—CABOT STREET MUNICIPAL BATH, BOSTON, MASSACHUSETTS



boiler room. This main will be arranged with a set of steam jets connected so as to blow live steam into the water, and thus maintain an even temperature at all times of about 70°. In the summer time the water will not need to be warmed. During the winter, however, it is expected that after the water is warmed to 70°, and the room is kept at that temperature, the cost of keeping the water warm will be but slight. The tank will hold about 90,000 gallons of water and will run in depth from 3 to 6 feet. The sides and bottom will be of French ceramic tiles, laid in pure cement, and as the water will be fresh every day, and the top drawn off frequently, the pool should look inviting at all times. The walls about the tank are divided by a series of pilasters into large panels, all done in hard plaster, to be painted ivory white. The wainscoting will be of white Georgia marble, and the whole place is so arranged that it may be cleaned out thoroughly without too much expense in the way of help.

Adjoining the pool and on the same level is a series of shower baths placed so that no one may enter the tank without first having a good shower bath, with soap. Here an attendant will be stationed to see that no one enters the pool without first washing thoroughly. Close to these shower baths is located another series of 12 shower baths, capable of bathing 1,000 people per day. These are in a separate room, with private dressing rooms, and are for those who only come to the house for shower baths. By an arrangement of doors these shower baths may be used to handle large crowds of boys in classes. In this part of the building are 300 lockers for the use of those entering the pool. By an arrangement of curtains these lockers will be used by the girls. There are about 50 separate rooms, 3 by 4 feet, for women. On the floor above are locker rooms and dressing rooms to care for about 600 people at one time.

Above the tank and extending over the locker rooms will be the gymnasium, about 40 feet wide by 80 feet long, with space for a running track about 30 laps to the mile. The gymnasium is about 30 feet high, and will have a handball court arranged with movable sides later on. It will be equipped with basket-ball courts, and all the different apparatus found in first-class gymnasiums. This floor at the front has a series of shower baths and about 200 lockers for men and 20 dressing rooms for women and girls.

The entrance hall is finished in oak, filled and finished in hard oil, and the rest of the house is done in cypress, with hard oil finish. As far as possible woodwork is avoided and hard plaster substituted, which, with the walls, will all have four heavy coats of paint, generally of light colors, the wainscoting being in buff.

The building will be open every day for showers and bathing in the pool. It is expected that two days of the week women and girls will have exclusive use of the pool and gymnasium. On Sundays the gymnasium will be closed. There will be two classes every day, one for boys and one during the evening for men. On women's days there will be classes for schoolgirls, mothers' classes, evening classes for working girls, and special classes for invalids, and general work. It is expected that the patronage of no less than 1,500 people can be accommodated each day, and on Saturdays and Sundays, when the whole plant will be in use for bathing, not less than 2,000 people will use the place.

NORTH END BATH.

Work will soon be begun on a large indoor bath in the North End. This building will be 60 feet wide by 80 feet in length and will contain three stories and a gallery (Plate 139). It will be constructed of brick and terra cotta, and will be equipped with 67 showers and 41 inclosed baths, with connecting toilet rooms. As in the other indoor baths, different days will be assigned to males and females. This bath will be open the entire year, and will be the largest and most complete indoor bath in the city. It is stated that the total cost will be \$461,200, of which amount \$331,200 will be devoted to the purchase of the site and \$130,000 to the construction and equipment of the building.

SCHOOL BATHS.

For school children a system of special bathing facilities in the school-houses is proposed, to be under the direction of the school board. A beginning has already been made in the Paul Revere School, at the North End, and the Copley School, in Charlestown, where a number of baths are in successful operation. Baths were established in the Paul Revere School in 1899, consisting of two sets, one for each sex, at opposite ends of the basement, which are open every school day. On the girls' side there are 10 individual compartments, each containing a seat and spray. These compartments are of marble on three sides, with the entrance screened by a rubber curtain hung from rings, which can be drawn at the pleasure of the occupant. There are also in the same room 30 dressing closets, each containing a seat, hooks for clothing, and provided with a self-closing blind door. The floor is of asphalt, covered with movable slatted walks. The Gegenstrom showers are used, and a matron is in daily attendance. No individual accommodations are provided for boys, the showers being grouped in a space about 10 by 15 feet, so that 12 pupils may bathe at the same time. The remainder of the room is used for dressing purposes, an oaken bench running along two sides of the walls, above which are hooks for clothing. This room is in charge of the janitor.

Soap and towels are furnished without expense to the pupils. The arrangements for the use of these accommodations are such as to afford an opportunity to every pupil to bathe once a week throughout the school year, but this is not compulsory. A certain time for bathing is assigned each class, when those pupils who so desire are given an opportunity to avail themselves of the facilities described. No pupil is allowed to remain under the shower for more than three minutes.

Pupils in the grammar as well as the primary school are alike admitted to these privileges, with the exception of those who are too young to undress and dress themselves without considerable assistance.



PLATE 139—NORTH END MUNICIPAL BATH, BOSTON, MASSACHUSETTS

by 4½ feet. Each room is furnished with a seat, hooks, and mirror. From the basement story of each yard a subway 12 feet in width and 8 feet in height extends under the driveway and opens upon the beach.

The first floor of the administration building is occupied by the entrance hall, counters for sale of bath tickets and distribution of suits, rooms for deposit of valuables, toilet rooms, and room for the storage of bathing suits. The basement floor contains hall of exit, toilet rooms for bathers, rooms for the delivery of valuables, boiler room, hospital, coal bunker, and general storage room. The second and upper floor contains the laundry, office, repair and linen rooms, and toilet rooms for employees. The laundry is open to the dome, and here are placed the tanks from which hot and cold water are supplied.

The building is designed to provide for the handling of large numbers without confusion or danger, and the system may best be explained at this point. Persons desiring to use the building enter on the first floor from the driveway. Each half of the building is the counterpart of the other, and men turn to the right hand and women to the left hand of the entrance hall. Here the bather purchases a ticket at a semi-circular counter, entitling him to the use of suit, towel, and dressing room. The tickets are numbered consecutively and the purchase is recorded by a cash register. Passing along the counter, on presenting his ticket he receives suit, towel, and key. He then passes through a turnstile, where the ticket is taken up by the gate keeper. This brings him into an anteroom leading to the bath yard; here, if he chooses, he deposits his valuables at a window on the right in an envelope, which he seals, writing his name across the back and receiving therefor a numbered check. The bath-house key is on a ring of rubber large enough to draw over the head, and the valuables check is suspended on a snap device which permits of its being attached to the same ring with the key. Passing into the bath yard the attendant directs him to a dressing room; when dressed for the bath the bather passes through the subway to the beach. On returning from the water his key and bath suit are a passport to the police officer who guards the entrance to the subway. Before entering his dressing room he has the privilege of using the shower baths at the two sides of the subway. Resuming his street apparel, the bather leaves his wet suit and towel in the bathroom, to be gathered up by the attendants, and passes out of the yard into the basement floor of the administration building, leaving his key with the guardian at the turnstile. Turning to the left, he presents his valuables check at a window and identifies himself by writing his name in a book. The envelope containing his valuables has been sent down from the floor above and is then delivered to him. He can leave the building either by the rear door on the town highway or return to the entrance hall by a broad stairway.

The wet bathing suits and towels are gathered up and sent by elevators to the laundry. There they are washed, dried, ironed, and returned by elevators to the storage rooms in the rear of the counters. The keys, as fast as delivered up, are returned from the basement exits to the first floor, where they are placed on the key rack, indicating that the room is again ready to be let. The only comment to be made on the system is that in its practical working it has been eminently satisfactory.

The plans for the bath house also included plans for the erection of

three series of shelter buildings on the water side of the driveway. One of these is located directly in front of the bath house, furnishing an opportunity for the public to do the bathing. The foundations are of stone and concrete, the framework of iron, and the roofs slated. This shelter is divided into two portions, each 140 feet in length by 20 feet in width, leaving an open space between and directly opposite the entrance to the administration building, and providing an approach to the beach from the driveway by a broad flight of steps. The entrances to the subways from the beach are combined with these shelters. Another shelter was built at the site of the old Strathmore Hotel, between Beach street and Shirley avenue, and is of similar plan, except that an ornamental band stand is placed between the two shelter buildings. The third shelter was planned for a space opposite Revere street.

The laundry plant was especially designed and constructed to meet the requirements of the bath house, and the system pursued is as follows:

After use the wet bath suits are first washed in the washing machines and are then placed in the centrifugal wringers; they are next passed through mangles to further dry them, and are then hung in the drying room. When practically dry they are again passed through mangles, folded, and then go to the repair room for examination. The laundry plant has a capacity of 500 suits an hour, thus enabling the same suits to be used several times on the same day without discomfort or danger to health.

The water for the laundry, toilet room, drinking fountains, and fire-protective apparatus is supplied from 12 driven wells, analyses and tests having first demonstrated that excellent water could thus be obtained in sufficient quantities.

The administration building, bath yards, subways, front and rear entrances, and bath-yard walls are lighted with incandescent electric lights. The lights are all controlled from a large switchboard in the administration building, so arranged that any section of the line can be thrown on and off at will. The total number of incandescent lamps is 1,331.

The following account of subsequent additions to the bathing plant is taken from the report of the commission for 1900:

As to the Revere Beach reservation, the most important work of the year has been the repairs to the bath house and the building of an extension of the plant, which includes an additional yard on the men's side, a laundry building, and a police station. The fire which occurred in September, 1898, totally destroyed the roof of the bath house and the large wooden tanks of the laundry plant on the second floor of the building. Considerable damage from water and falling debris was also suffered on the first floor and in the basement. The roof, which was formerly of wood covered with slate, has been replaced by an iron structure covered with tiles, and the large wooden tanks have been replaced by steel tanks. The repairs also included the restoration of the plumbing and electric-lighting system, repairing of ceilings, cleaning of walls, etc. Nearly the entire stock of bath suits was also destroyed, as the fire took place in the night, after Labor Day, when a great number of suits had been used and had been taken to the laundry at the close of the day.

The building of the extension of the bath house, laundry, and police station was authorized by an act of the legislature of last winter, approved on March 11. Contracts were at once executed and the work begun. The repairs to the bath house were all made and the new laundry and dressing rooms finished ready for use on June 10, the day set for the opening. The contractors were allowed a longer period for completing the police station, but delivered it for use before the time required. The bath house now contains 1,700 dressing rooms. The women's yard, which originally contained 402 rooms, has been enlarged by including the space formerly occupied by the bicycle shed on the Ocean avenue side and building 322 lockers, thus making a total of 724 women's dressing rooms. The men's yard contained 654 rooms, including those added in the rear last year. This has now been added to by building on the land directly north of the old yard a new yard 93 feet long by 81 feet wide and extending from the ocean side on the driveway through to Ocean avenue. In this new yard, which is separated from the old by a brick wall with fireproof doors between, are 322 rooms, thus making a total of 976 men's lockers. Fourteen new shower baths have been placed at the subway entrance to the beach, and are very largely used. To the north of the new yard, and facing on Ocean avenue, is the new laundry, 120 feet long and 65 feet wide, a two-story brick building, of mill construction, with monitor roof. The lower story is used for bicycle storage room, with entrance on Ocean avenue. The new laundry is equipped with 6 washers, 9 centrifugal extractors, 3 steam mangles, and a steam drying room 86 feet in length. The power is furnished by a 40-horsepower horizontal engine, supplied from two horizontal tubular boilers, which also furnish steam for the laundry and steam pump.

The report of the park commission for 1903 states that—

The Revere Beach Bath House was used by 113,783 persons, as against 170,993 for the previous year. The falling off is to be accounted for by the unusually bad weather for bathing. The record for a single day, however, was surpassed on Labor Day, September 1, when the bath house was patronized by 8,721 bathers. The addition of the boys' bath-room made this possible. In this large room with benches the boys dress and undress, leaving their clothing in lockers and receive a check therefor instead of a key. This room will take care of 500 boys at a time, and on hot days greatly relieves the line of men bathers waiting for bathrooms.

The commission, in view of the previous successful season, decided to try the experiment this year of reducing the prices at the bath house, and on the opening of the bath house fixed the price for adults at 20 cents. By July 26 it became clear that the reduction in price would result in a serious deficit, for which no appropriation was available. The commission therefore restored the price for adults to 25 cents. The restoration of the price and the improvement in the weather for bathing purposes resulted in keeping the deficit slightly within the surplus left from the previous summer's receipts. The total amount of receipts was \$23,242.85, and the expenditures were \$29,566.89.

Concerning the Nantasket Beach reservation, the report for 1903 says:

Several new buildings have been erected and alterations in the old buildings made. This has made possible a rearrangement with the



PLATE 140—STATE BATH, REVERE BEACH, MASSACHUSETTS

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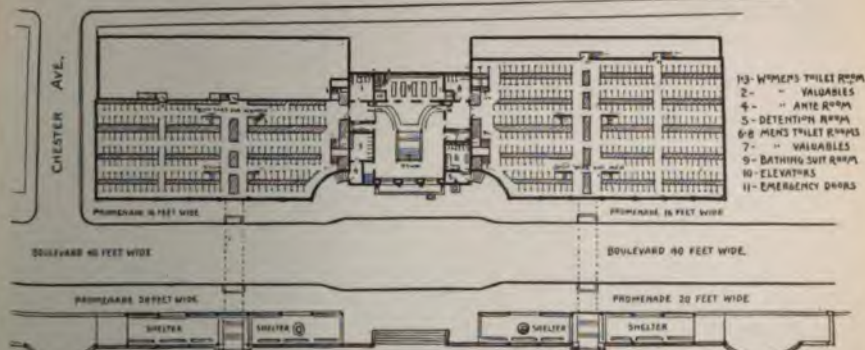


BASEMENT PLAN
SLOPE 1/2' 1'-0"

Average High Water Line

- 1 - WOMEN'S TOILET ROOM
- 2 - " VALUABLES
- 3 - " RELAXING ROOM
- 4 - BOILER ROOM
- 5 - MEN'S VALUABLES
- 6 - " TOILET ROOM
- 7 - ELEVATORS
- 8 - EMERGENCY DOOR

OCEAN AVE.



FIRST FLOOR PLAN
SLOPE 1/2' 1'-0"

Average High Water Line

- 10 - WOMEN'S TOILET ROOM
- 2 - " VALUABLES
- 4 - " RELAXING ROOM
- 5 - DETENTION ROOM
- 6 - MEN'S TOILET ROOMS
- 7 - " VALUABLES
- 9 - BATHING SUIT ROOM
- 10 - ELEVATORS
- 11 - EMERGENCY DOORS



end in view of increasing the attractiveness of the reservation and at the same time adding to the convenience of administration. These changes have also been made having in mind the probable future development of the reservation if any of the old buildings should be removed.

The new bath house was completed and opened June 21. It is located to the east of the hotel, and has a frontage on the beach of 335 feet and a depth of 62 feet. The administration department is placed in the center of the façade and is of higher stud than the remainder of the building. The public can enter either from the county road, on the south side, or from the plank walk, on the north side, into a 26 foot corridor, running clear through from front to rear and 25 feet high. On either side of this corridor are the cashiers' desks, registering turnstiles, and counters for the delivery of bathing suits to applicants. Beyond the counters and near the doorways into bath yards are rooms for the checking of valuables. The bath yards are built on similar lines to those at Revere Beach, consisting of stud and shingled walls, inclosing 200 dressing rooms on one side and 192 on the other. These dressing rooms are roofed, leaving the corridors open to the sky. Toilet rooms for bathers only are conveniently located opposite the broad stairs which lead down from the level of the bath yard and under the plank walk to the beach. Foot tubs with hot and cold water showers are placed near the head of the stairs. At the ends of all the principal corridors are exit doorways, to be used only in emergencies. An office for the superintendent and storage rooms for the bathing suits and towels open into the main corridor of the administration department. On the water side there is a wide plank walk connecting with the hotel piazzas. The entire building is of frame construction, covered with shingles left unstained. The roofs are composition and painted red, the trimmings are clear white, and doors and lattice screens a delicate green. Floors are of matched hard pine, and interior finish is of Gulf cypress.

Next to the bath house on the west is a shelter building, which is built in part of the piazza of a hotel which formerly stood on this part of the beach. A board walk connects this shelter with the hotel and is continued in effect by the broad piazzas of the hotel. The police quarters have been removed from the archway between the hotel and the café building and the space utilized for a lunch stand and other restaurant purposes. Improvements have also been made to the band stand, which is on the beach, so that the music is now heard to better advantage on the piazzas and in the pavilion of the hotel. Considerable changes have been made in the kitchen and laundry of the café, and the hotel administration is now screened from the street. West of the hotel, where the old bath houses stood, a new pavilion and shelter has been built, connected by a board walk with the hotel piazza. This board walk continues on to the merry-go-round, and by this building to the roller coaster, which has been built by the owner at the westerly terminus of the board walk. The administration buildings of the reservation are on the opposite side of Nantasket avenue between the railroad and the street. Beginning at the end toward the steamboat pier and railroad station is the police station, which was finished last year. In the rear is the hose house, containing the fire apparatus. West of these buildings is the dormitory occupied by the police force; next is a sanitary building, and beyond this the new boiler and laundry

house. The boiler plant supplies steam for the bath house laundry, roller coaster, merry-go-round, and the hotel laundry and kitchens. There are two 120-horsepower boilers and the usual appurtenances to such a plant.

The bath house was run by the commission on the same lines as the one at Revere, at the following scale of prices:

	Cents.
For use of bathing suit, towel, and dressing room	25
For use of towel and dressing room	20
For use of child's suit, towel, and dressing room	10

The bath house was used by 22,905 persons. The largest day was on Labor Day, September 1, when there were 1,709 bathers. The total of receipts from the bath house was \$6,645.70, including \$1,550 received from lessees for steam supplied them from the laundry plant. The expenditures were \$7,868.04.

The reservation was very largely used by the public, especially during the last part of the season, when the weather was more favorable and good order was maintained.

BRIDGEPORT, CONNECTICUT.

Previous to the establishment of public bath houses in Bridgeport there appears to have been very little agitation of the question beyond an occasional reference in the local papers to the necessity of providing a shelter of some sort for persons desiring to bathe in the waters of Long Island Sound.

In 1901 the board of park commissioners, realizing the need of better bathing facilities and feeling it incumbent upon them to take the lead in the matter, asked for and obtained an appropriation of \$2,000 to be used in the erection of a suitable building. A point on the shore at the western end of Seaside Park was chosen as best adapted to the purpose, as the water here was clear and the conformation of the shore such as to render it safer for those who could not swim.

The first bath house, containing 74 rooms, was completed and thrown open to the public in July, 1901. This house proved to be so popular that a further appropriation of \$1,800 was asked for, and 68 additional rooms were constructed during the following year. The first building cost \$1,750, and is reserved for the use of males. The second building, or addition, was erected in 1902 at a cost of \$1,680, which included about 1,200 feet of 2-inch water main. It is set apart for the exclusive use of females. Each building contains a fresh-water shower and a tub.

The houses are open from June 1 until October 1 of each year, and no charge whatever is made for their use. Bathers are required, however, to be suitably attired, and if they have no suits of their own they can hire them of the keeper at a cost of 15 cents each. The suits belong to the keeper and the income from their rent is his perquisite. No preference is shown in the allotment of a room to those hiring suits. The total cost of maintenance and operation for the season of

1902 was about \$250. No record was kept of the number of bathers, but it is estimated that from 12,000 to 15,000 persons patronized the baths during the summer.

BROOKLINE, MASSACHUSETTS.

The public bath maintained by Brookline bears the distinction of being not only one of the most attractive and complete in the country, but with one exception the first municipal bathing establishment in the United States open all the year round and possessing warm-water cleanliness baths and a pool of sufficient size for swimming purposes. The following very complete account not only of the movement leading to the establishment of this model bath, but also of its construction and operation has been compiled largely from information furnished by Dr. M. Lincoln Chase, who has been prominently identified with the project from the beginning and is now the secretary of the committee on care and management.

In 1895 the town, with a population of nearly 20,000 persons, possessed no place, either public or private, where those who lacked facilities for bathing at their homes could obtain warm baths. Nor was there any pond or river suitable for open-air bathing. For a few years a small brick swimming tank in the brook near by had relieved the situation somewhat during the summer months, but the pollution of the stream by refuse from stables and other buildings finally caused the board of health to order its abandonment and removal.

The subject of a municipal bath had been given more or less attention from time to time. It was not until 1895, however, that definite steps were taken toward supplying the want so generally recognized by all classes of citizens. In that year the proposition to establish a public bath was presented at a town meeting, with the result that a special committee was appointed to examine into and report upon the matter at a future meeting.

This committee, after a thorough investigation of several of the best bathing establishments in this country and abroad, submitted its report recommending the building of an all-the-year-round bath house, containing ample swimming facilities as well as cleanliness baths. After full discussion in town meeting the citizens voted to carry out the recommendations of the report and appointed a committee to select a location and prepare plans. The result is a building which cost the comparatively large sum of \$43,000, but which has so far met all requirements and has completely fulfilled the expectations of those who first conceived the idea of such an establishment. The bath (Plates 142 and 143) is situated on Tappan street, near the center of population of the town, and in close proximity to its principal public playground and the high school. It is a T-shaped building of red brick

with light sandstone trimmings, and has a frontage of 82 feet by a length of 124 feet. The head house has a handsome main entrance in the center, with a vestibule and main hall or waiting room containing an iron-work inclosure and counter for the attendants.

To the right of the hall is the instruction room, 25 by 28 feet, fitted up with 6 double dressing rooms, a toilet room, a shower bath, and a swimming tank 22 by 10 feet, with a depth of water varying from 3 to 4 feet. This room is used wholly for instruction in swimming.

To the left of the hall is a room having the same dimensions as that just described, from which open 6 shower and 3 tub baths, with arrangements for 3 more shower baths when needed. Each shower and tub bath has a dressing room attached. These are inclosed by white marble partitions set on nickel-plated standards. The floor of the shower compartments is depressed 4 inches, and is provided with a drain in the corner with standing overflow, so that this trough is filled with water to enable bathers to soap and wash before using the shower. A circular wooden seat is provided and the temperature of the water is under the control of the bather.

A door on either side of the attendants' inclosure leads to the larger swimming hall or natatorium, which measures 41 by 94 feet and contains a tank 26 by 80 feet, with a depth of 7 feet at one end and 4 feet at the other. In this hall there are five shower baths, for every bather must take a warm shower bath, with soap, before entering the swimming tank. The construction of the tank is the same as that of the smaller one used for giving instruction in swimming. Around its sides and at the level of the water are located 16 inconspicuous marble cuspidors, firmly set into the walls of the tank, at a distance of 8 feet apart. Brass hand rails are bolted to the cuspidors, each of which has a waste pipe connected with it. Marble steps at the four corners lead into the water. A large copper gargoyle, representing a dolphin carrying the infant Neptune, and located at the end of the tank, supplies a stream of water which tends to sweep the surface of the pool clear of impurities. Three sides of the hall are occupied by 42 dressing rooms, which are entered from a corridor running along their rear, a front door from each room opening upon the walk around the edge of the tank. This rear passageway, which is found in the best public baths in Germany, secures better ventilation of the dressing rooms and perfect freedom from street dirt on the walk around the tank, where only persons in bathing costume are allowed. A gallery provided with seats for spectators runs around the four sides of the natatorium over the dressing rooms. The ceiling is arched, and about 40 feet above the floor level is a large monitor skylight, which, with large semicircular windows above the gallery and in the gable end, furnishes an abundance of light and air. Suitable inscriptions relating to bathing and swimming adorn the ceiling and



PLATE 142—MUNICIPAL BATH, BROOKLINE, MASSACHUSETTS

1. The first part of the document is a list of names and addresses of the members of the committee.

2. The second part of the document is a list of names and addresses of the members of the committee.

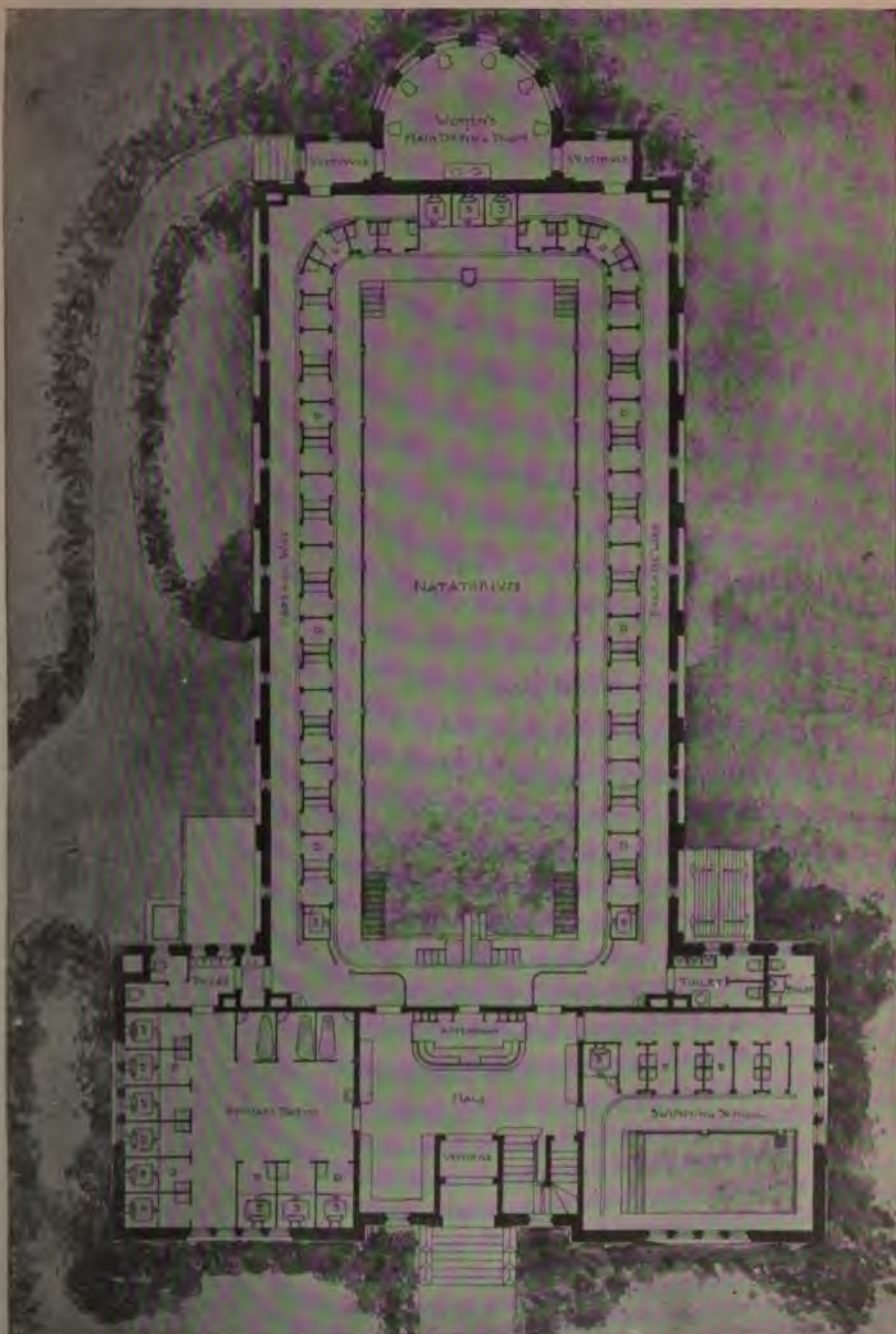


PLATE 143—MUNICIPAL BATH, BROOKLINE, MASSACHUSETTS



walls. The water for the large tank, as well as for all other purposes in the building, is drawn directly from the town supply of drinking water, and is of the purest quality. It is heated before entering the tank and maintained at an even temperature of 78 degrees, the room being kept at the same temperature. The tank contains over 70,000 gallons of water, and three times a week regularly, and in summer more frequently, the water is entirely drawn off and the tank thoroughly cleansed and refilled. Besides this the water is being constantly changed while the tank is full by means of a superficial current which carries off all impurities. The entire amount of water used for all purposes during the past year approximated 14,000,000 gallons.

The rain baths are of the "Gegenstrom" pattern, and there are 15 of them in various parts of the building, with space for 3 more when needed. The walls of the two swimming tanks are of English white enameled brick, and the bottoms are paved with light adamantine mosaic, with a figured border, the whole giving a most pleasing effect.

At the extreme end of the main building, and opening from the dressing-room corridors on either side, is situated the ladies' hair-drying room. This is a handsomely finished room, semicircular in shape, and well lighted. It has a terrazzo floor, a dado of cypress, marble bowls, mirrors, and 6 hair dryers supplied with steam heat. These dryers, which are exclusively for women and girls, are 10 inches in diameter and are made of galvanized iron. They are heated by a steam coil, and space is allowed at the bottom for air to enter the tube. This air, heated by the steam coil, passes out at the top, thus speedily drying the hair.

All rooms on the main floor except the hair-drying room have granolithic pavements, which are slightly graded to central points, where small grated outlets carry off the water used in washing down the floors. The portion under the dressing rooms is heated in winter by a system of steam coils underneath. By this means the floors are warmed and dried.

In the basement is located the laundry, where all bathing suits and towels are washed. These are subjected to a thorough sterilizing by first being steamed and then dried in a steam drier at a high temperature.

On the second floor of the head house are situated two waiting or reading rooms, which are also used for lectures and for meetings of the swimming club. Here are found also a storeroom, 4 dressing rooms for the use of the swimming instructors and the matron, and the private office of the superintendent. The building is well equipped with gas and electric lights, toilet rooms, and other modern conveniences. The grounds are laid out with lawns and shrubbery, and are cared for by the park department.

The baths are open every day during the year except on three holidays and Sundays. The following schedule of hours and rates, together with the appended rules and regulations, has been formulated for their management:

Hours for use of natatorium.

[General arrangement except from July 1 to September 15, when the summer schedule is substituted.]

MEN AND BOYS.

Monday.—From 2 to 5 p. m. Fee, 5 cents. (Also free practice for schoolboys receiving instruction.)

Tuesday.—For men, and boys over 16 years, from 6 to 9 p. m. Fee, 10 cents.

Wednesday. From 2 to 5 p. m. Fee, 5 cents.

From 6 to 9 p. m. Fee, 25 cents for residents; 50 cents for non-residents, except to holders of commutation tickets.

Thursday.—For men, and boys over 16, from 6 to 9 p. m. Fee, 10 cents.

Friday.—From 9 a. m. to 12 m. Fee, 10 cents.

Reserved for free instruction for schoolboys from 2 to 5 p. m.

For men, and boys over 16, from 5 to 9 p. m. Fee, 15 cents.

Saturday. From 9 a. m. to 12 m. Fee, 5 cents.

For men, and boys over 16, from 5 to 9 p. m. Fee, 10 cents.

WOMEN AND GIRLS.

Monday.—From 9 a. m. to 12.30 p. m. Fee, 15 cents.

For women, and girls over 16 years, from 6.30 to 9 p. m. Fee, 10 cents.

Tuesday. From 9 a. m. to 12.30 p. m. Fee, 10 cents.

Reserved for free instruction for schoolgirls from 2 to 4.30 p. m.

Wednesday.—From 9 a. m. to 12.30 p. m. Fee, 10 cents.

Thursday.—From 9 a. m. to 12.30 p. m. Fee, 10 cents.

From 2 to 4.30 p. m. Fee, 5 cents. (Also free practice for school-girls receiving instruction.)

Saturday.—From 1.30 to 4 p. m. Fee, 5 cents.

NOTE.—During the summer season the use of the public baths is wholly free to resident bathers on Tuesdays and Thursdays except during the evening, no charge being made for the use of suits or towels.

Hours for private baths (rain baths and tub baths).

MEN AND BOYS.

Monday	2 to 5 p. m.
Tuesday	6 to 9 p. m.
Wednesday	2 to 9 p. m.
Thursday	6 to 9 p. m.
Friday	9 a. m. to 9 p. m.
Saturday	9 a. m. to 12 m.; 5 to 9 p. m.

WOMEN AND GIRLS.

Monday	9 a. m. to 12.30 p. m.; 6.30 to 9 p. m.
Tuesday	9 a. m. to 4.30 p. m.
Wednesday	9 a. m. to 12.30 p. m.
Thursday	9 a. m. to 4.30 p. m.
Saturday	1.30 to 4 p. m.

NOTE.—The maximum time allowed in a private bath is three-quarters of an hour

Fee for private baths.—Tub bath, 10 cents; shower bath, 5 cents (except Wednesday and Saturday), including charge for soap and towels.

Free.—Wednesday, 9 a. m. to 9 p. m., and Saturday, 9 a. m. to 9 p. m.

Instruction in swimming is given during the entire year by competent instructors.

The terms for swimming instruction are as follows:

Twelve (class) lessons	\$6. 00
Individual instruction (12 lessons)	10. 00
Individual instruction (less than 12 lessons) each	1. 00

Classes may consist of not less than four nor more than six pupils, and in all cases must be formed by those desiring instruction.

The terms for class lessons apply only between August 1 and April 1.

After April 1 and until August 1, class instruction will be at the same rate as individual lessons.

When a ticket is taken for a course of lessons, whether individual or class lessons, it is to be understood that they must be completed within six months, or the remaining lessons will be forfeited.

Appointments for lessons may be arranged either by letter or by telephone. When made they must be kept, or will be considered as lessons given, unless canceled twenty-four hours in advance. Any member of a class who, for good and sufficient reasons, is obliged to miss any of the lessons, will have three lessons made good at the completion of the course.

Nonresidents are allowed the privileges of the baths on payment of a uniform rate of 25 cents, except as below stated.

For the benefit of nonresidents, commutation tickets are issued at the rate of 25 admissions for \$3 or 50 admissions for \$5. These tickets, in consideration of the reduced rates, are positively nontransferable, and can be used only by the persons whose names they bear, and expire one year from the date of issue.

Bathing suits and towels are provided free by the establishment. These suits and towels are thoroughly sterilized every time they are used. Any persons desiring to keep their own suits and towels at the baths can do so by renting a locker and having the articles distinctly marked. They will be washed, dried, and returned to the locker after being used. The fee for the use of a locker is \$1 per year.

The bath is open on all holidays for men and boys only until 6 p. m.; last entrance at 5 p. m. Fees: Mornings, 5 cents; afternoons, 10 cents. Private baths: Tub, 10 cents; shower, 5 cents.

Rules and regulations.

Strict observance of the following rules, being necessary for the safety and comfort of the bathers, will be insisted upon by the superintendent and his assistants:

1. All persons must wear bathing suits or trunks. Only bathing suits of cotton, mohair, Danish cloth, or other material without nap, are allowed, and the colors (preferably blue, gray, black, or white) such as will not run.

2. No person who is ill or in the least indisposed should enter the swimming tank.

3. Every bather, before entering the swimming tank or the instruction tank, is required to take a warm shower bath with soap and to wash his feet. The six rain baths in the natatorium and the swimming school afford the necessary facilities. All the soap should be washed off the body before leaving the cleanliness bath. The time limit for the use of the rain bath is three minutes for men and boys and five minutes for women and girls.

4. The maximum time in the swimming tank must not exceed thirty minutes, and there must be no unnecessary delay of others by lingering in or about the dressing rooms.

5. Quiet and gentlemanly deportment will be expected in all patrons of the establishment. Yelling, running, pushing into the water, and other boisterous or dangerous practices will not be tolerated.

6. All bathers unable to swim should enter only at the shallow end of the tank, where the water is 3 feet deep.

7. Spitting into the water, or any other defilement of the water or floor, will be cause for immediate expulsion; cuspidors are conveniently located around the tank at the water level and in the dressing rooms. The use of tobacco in any form is forbidden in any part of the building, and dogs are not allowed entrance.

8. Diving or jumping from the gallery is absolutely forbidden under any circumstances, and great care should be exercised by beginners when diving from the springboard, under which the water is 6 feet deep.

9. Any injury to property of the establishment, such as scratching or breaking the windows or mirrors, or scribbling on the walls of the dressing rooms, will be charged to the person responsible for it.

10. Valuables may be deposited with the superintendent or his representative, but the town will take no responsibility in the matter of articles lost or stolen in the building. The management, while using every precaution, will not be responsible for any injury to any person from the use or abuse of the facilities offered.

11. The inner passageway around the tank is to be used only by bathers in bathing costumes.

12. The superintendent and his assistants are required to enforce the strict observance of the above rules, and to do everything else in their power for the comfort and welfare of the patrons of the baths. All complaints and recommendations should be over the maker's signature, addressed to the committee.

Hints and suggestions.

1. Do not enter the bath immediately after a full meal. If from mental or physical labor one feels exhausted, he should rest before going into the water.

2. "Cooling off" while undressed is contrary to all good sense. Cool off before undressing; never leave the skin unprotected. If the action of the heart and the respiration have become normal, after exercise, a warm or even a moist skin need not prevent one from plunging into the bath, but, on the contrary, it enables him to enjoy his bath all the more.

3. Do not stand still in the water to talk, but keep moving after entering the water, and if tired from swimming go and dress imme-

It is to be hoped that this may represent an added step in the same direction. If some system can be devised by which the two adjoining departments devoted to health can be made to harmoniously work together, it would seem probable that the bath house would not only do better work than it is at present doing, but would also very much add to what the gymnasium could accomplish. The two together should represent a center of physical education for the town, from which should emanate ideas which would materially benefit the health of the whole community. A plan of management which would make it possible for the two to be placed under one direction would increase their efficiency as already indicated and materially curtail the expense of administration.

BROOKLYN, NEW YORK.

A brief history of the movement for public baths in Greater New York will be found in connection with the description of the baths of the Borough of Manhattan, which comprises that portion of the city popularly known as New York.

FLOATING BATHS.

Besides its indoor baths, the Borough of Brooklyn maintains at the present time 5 free floating baths, which are much frequented during the summer months. These baths are substantial structures, equipped with 60 dressing rooms each, and costing on an average about \$15,000 (Plates 144 and 145). They are entirely free, no fees being charged for admission, the use of a room, or for any other privilege connected with the baths. They are similar in construction to those of the Borough of Manhattan, described elsewhere. Although open less than four months of the year, over 1,000,000 bathers were accommodated, over 10,000 bathers having been recorded during the last week in which they were in operation. Had the season been a warm and favorable one, it is estimated that at least a million and a half bathers would have been recorded for the period from June 25 to October 15. During the summer each bath was equipped with a swimming apparatus for the instruction of novices by Augustus Sundstrom, the swimming teacher of the board of education. This apparatus, which is similar to that in use at the floating baths of the Borough of Manhattan, is one designed by Mr. Sundstrom, and consists of a canvas belt large enough to encircle the human body, suspended from the roof of the bath directly over the swimming pool. Pupils are supported by the belt in position for swimming, and are thus taught the proper motions.

Bathers are required to observe the following schedule of hours and regulations:

Open daily from June 25 to October 15.

Men and boys.—On Tuesdays, Thursdays, Saturdays, and Sundays from 5 a. m. till 9 p. m.

Women and girls.—On Mondays, Wednesdays, and Fridays from 5 a. m. till 9 p. m. Boys and girls under 14 will not be admitted after 6 o'clock p. m.

Regulations of the bath.

1. Any person may be refused admission for sanitary or police reasons, according to circumstances. If required, bathers must give their names and addresses.

2. Women and girls will be required to use suitable close-fitting bathing dresses. Wrappers or other loose garments will not be allowed. All males over 15 years of age must wear tights or other proper bathing suits. Bathers must provide these suits for themselves, as none is to be had on the bath.

3. No swearing, profanity, or noisy language will be permitted. Any person guilty of the same will be liable to expulsion.

4. Any person detected in defacing the premises in any manner will be arrested.

5. All persons must retire as soon as dressed.

6. No person shall occupy a dressing room longer than twenty minutes from the time it is taken.

7. No person will be allowed to remain in the water more than fifteen minutes. The keeper shall, in cases of great demand for baths, shorten the time of boys to accommodate other persons.

8. Bathers shall not stand about the platforms, nor occupy dressing rooms after dressing.

9. No dogs will be allowed in any part of the bath.

10. Money, clothes, or other property left in the house or rooms will be so left at the risk of the owner.

11. All questions of priority of bathing, use of rooms, or rules shall be finally decided by the keeper.

12. The gong will be struck every fifteen minutes, whereupon all bathers must immediately dress and vacate the bath house.

13. Smoking will not be allowed in any portion of the bath.

14. The bath must be washed out every night and all defacements carefully obliterated.

15. The keeper must see that the clock is kept in proper running order and illuminated at night.

16. The keeper will not be allowed to receive any money under any pretext whatsoever.

17. The keeper shall see that water is kept at all times for drinking purposes.

18. All the dressing rooms are for the use of the public, without distinction, and the keeper shall not reserve or keep any of them under lock and key. Any charge made, or inducement accepted, by the keeper or assistant for the use of rooms will be sufficient ground for dismissal.

19. Any bath attendant who shall permit intoxicating liquor to be brought upon the property will be instantly dismissed.

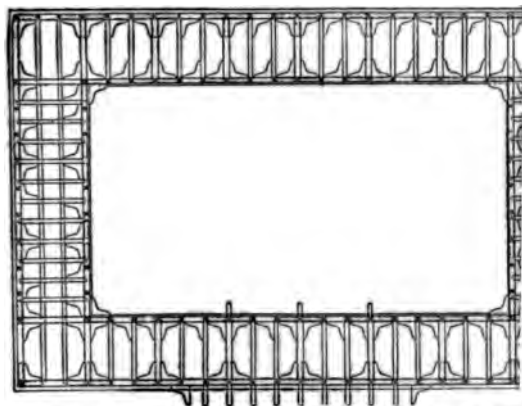
20. The signal lanterns must be kept burning all night; the keeper will be held strictly responsible for any neglect.

21. The keeper shall not allow the boat to be used by any person or persons other than employees of the bath, and it must be hoisted to its proper place on the deck immediately after being used.

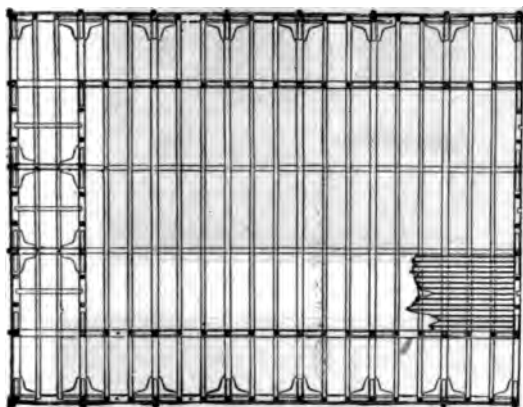


PLATE 144—MUNICIPAL FLOATING BATH NO. 2, BROOKLYN, NEW YORK

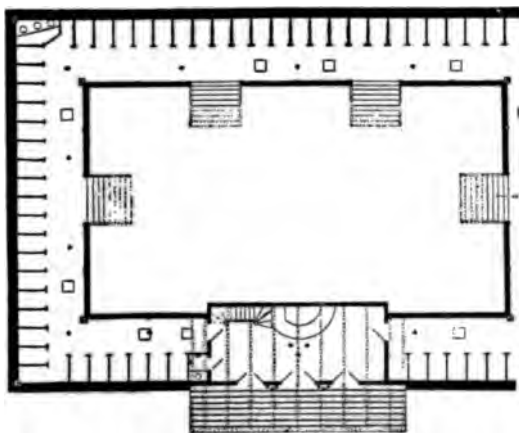




Upper frame plan



Lower frame plan



Platform plan

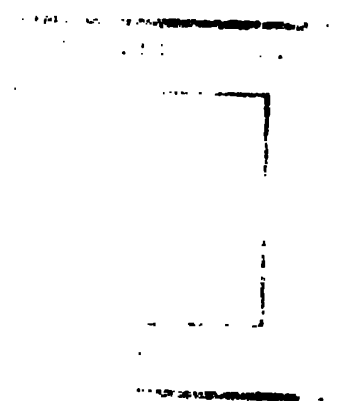
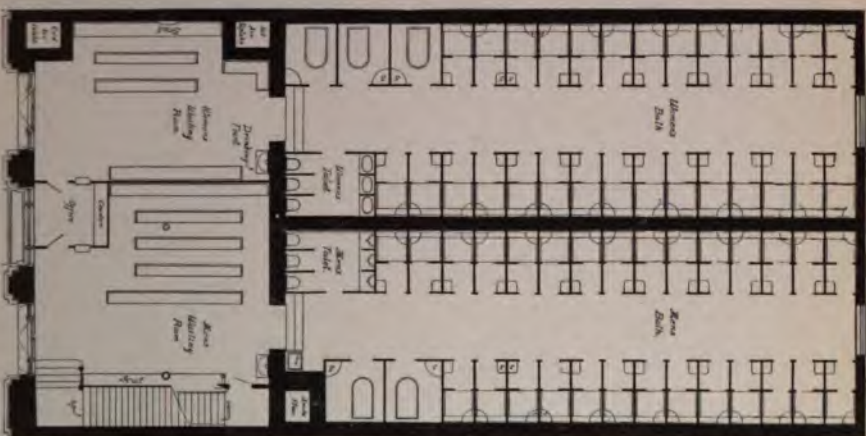




PLATE 146—PITKIN AVENUE MUNICIPAL BATH, BROOKLYN, NEW YORK



First floor plan



Second floor plan



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22. Employees must at all times be in a clean and tidy condition, and must give their entire time and attention to the bath and the bathers.

HICKS STREET BATH.

This bath is situated on the west side of Hicks street, north of Degraw street, on a lot measuring 35 feet 8 inches by 97 feet 6 inches, and contains two stories and a cellar. It was formally opened to the public on September 27, 1903, being the first indoor public bath established in Brooklyn. The exterior of the building is constructed of brick and stone, and is simple but attractive in appearance. The interior floors are of white marble terrazzo, the inner partitions of each compartment of Virginia soapstone and the outer partitions of polished marble.

The main floor is divided into two sections—one for men and the other for women. The men's section is equipped with 14 showers, 2 bath tubs, and ample toilet accommodations. The section reserved for women is similarly furnished, with the exception of an additional shower bath. Waiting rooms for each sex are also located on this floor. The second story, which is set apart for the use of young men and boys, contains 27 showers and 2 bathrooms, besides adequate toilet facilities. The building is entirely fireproof throughout, and is so arranged that a minimum number of attendants is required to operate the baths. The plumbing, while plain, is of the most substantial make and is up to date in every respect. The total cost of the bath, including equipment, was \$54,564, while \$2,500 additional was paid for the land upon which it is built. The average daily attendance since the bath was opened has been 1,166, or about 75 per cent of the total capacity.

PITKIN AVENUE BATH.

The site selected for this bath is on the south side of Pitkin avenue, near its intersection with Watkins street, adjoining the Hebrew Educational Institute. Like the Hicks street bath, it is located in a densely settled section that has hitherto been without public bathing facilities of any description. It occupies a plot of ground 50 by 100 feet in size and is two and one-half stories in height (Plates 146 and 147). Its total cost, exclusive of land, was \$79,300.

The front of the building is designed on colonial lines and is constructed of Harvard brick, laid in white mortar, with sufficient limestone trimmings to produce an artistic effect. The interior is finished with hard patent plaster and hard wood, and the stairs are of iron and stone. The first story covers the entire plot and contains 26 showers for men and 26 for women, in addition to 5 tub baths. Ample toilet accommodations for each sex are also provided. All of these are

located on the rear portion of the first floor, the front part being occupied by waiting rooms for men and women. On the second floor, which measures about 50 by 50 feet, are found 38 shower baths and 1 tub, with toilet rooms for youths and boys. Large skylights over the bathing compartments on these two floors admit an abundance of light and, in connection with an exhaust fan system located on the roof, permit proper ventilation in the summer time.

The building is fireproof throughout, concrete arches supported on steel beams for the floors and roof being used. The floors are laid with light-colored terrazzo and the roofs are finished with slag. The bath compartments and connecting dressing rooms are constructed of Virginia soapstone and roofed with wire glass. The shower fixtures are of the most approved pattern and are provided with attachments for regulating the temperature of the water to suit the bather. The drainage from the showers is received by gutters located in the rear of the stalls and fitted with detachable perforated iron covers, which prevent the stoppage of the drain pipes by lint or other foreign matter, at the same time facilitating the cleaning of the floors. A vault under the sidewalk contains two high-pressure safety tubular boilers for furnishing the heat and power. From these boilers the steam is distributed through wrought-iron pipes to the various points where it is required for heating and ventilating the building, providing warm water for the baths, running the pumps, etc.

This bath was first opened to the public on October 24, 1903, since which time an average of 15,000 persons a week have availed themselves of its privileges.

In addition to the two interior baths described above, provision has recently been made for the erection of three additional baths of this type, located as follows: One on Montrose avenue near Union avenue, one on Huron street near Manhattan avenue, and one on Duffield street near Concord street. Work was commenced on these baths in 1903, and it is expected that all three will be in operation before the end of the present year. The cost of each will approximate \$100,000.

BUFFALO, NEW YORK.

This city has in operation two absolutely free public baths (Plate 148), which are much frequented by the working classes. The first of these was opened to the public on January 1, 1897, and the credit for its establishment is due in large measure to the investigations and efforts of the Buffalo Charity Organization Society. A personal investigation of the tenement districts of the city, which was conducted by this association in the winter of 1894-95, brought to light the deplorable conditions under which many families belonging to the city's large foreign population were living, especially the lack of adequate bathing

facilities. Its members were thus well prepared to take the lead in advocating some form of relief. On several occasions the members of this association had cooperated with the health authorities in the enforcement of proper sanitary measures, and it was through their united efforts that the proposition to establish a free public bath was brought before the common council and finally carried to a successful conclusion. A measure enacted by the State legislature about this time, requiring cities of 50,000 or more population to establish and maintain such number of public baths as the local board of health might determine to be necessary, facilitated to a considerable extent the accomplishment of this end.

The bath, officially known as Public Bath House No. 1, is situated in the midst of the Italian tenement district, one of the most densely populated parts of the city. Health Commissioner Ernest Wende, M. D., in a report on the public bath system of Buffalo, from which much of the information embodied in this description was taken, makes the following statement as to the motives which led to the selection of a site for Buffalo's first municipal bath house:

It is hardly necessary to say that in the selection of the site density of population, overcrowded tenements of the poor, and cheap lodging houses, where the transient and shifting find accommodation, were regarded as the important considerations. It is located in police precinct No. 1, which has an area of only 0.86 square mile, or about 2 per cent of the entire area of Buffalo, yet, according to the police census of 1895, it has a population of 20,587, or 6 per cent of the entire population, and this notwithstanding the fact that a very large portion of the precinct is taken up by railroad tracks, the Terrace, canal, docks, depots, public buildings, stores, and manufacturing establishments.

Not long since an investigation of tenements in this section was begun by Miss Marion I. Moore, assistant secretary Charity Organization Society, who found that 2,784 persons were living in 72 tenement blocks, of whom 1,198 were parents, 1,263 children, and 323 boarders; 128 families were living in 1 room per family, 203 in two rooms, and 135 in 3 rooms. As bathing facilities, and, indeed, privacy of any kind, do not exist among these tenants, the establishment among them of a free public bath house is a real necessity. The wisdom of the locality selected was shown from the experience of the lack of conveniences and facilities required, in that the waiting room was constantly crowded, in spite of the existence of 14 compartments, into and out of which the bathers were hustled every twenty minutes. With this management the capacity of the 14 baths is capable of accommodating 42 persons an hour. Besides, there is a large open space for children, provided with 6 showers, and in which as many as 20 boys have been domiciled at one time.

The lot upon which the bath house is built is triangular in shape, with a frontage of 50 feet on the Terrace. The exterior of the building is constructed of hard clinker brick and Medina sandstone, and measures 68 feet long by 30 feet wide. The front portion is two

stories in height, with living apartments for attendants in the upper one, and a waiting room, toilet room, laundry, and infants' bath room on the lower floor. The rear portion of the structure is only one story high and contains 14 individual bathing apartments and 6 showers in one large open space, the latter being intended for the use of boys.

In the bathing apartments the walls are of brick, coated with enamel paint, the floors of concrete, and the partitions of slate in iron frames, the whole being nonabsorbent and affording no lurking place for disease germs. Each apartment contains a bathing room and a dressing room, separated by slate partitions. A perforated depression in the floor of the bathing room forms a convenient foot bath, at the same time permitting the water to escape as fast as delivered by the shower. The volume and temperature of the water are regulated by the bather, with the spray so inclined as to strike the body only from the head down.

The infants' bathroom is provided with a porcelain bath tub for the use of children too young to go under the showers. The wash room, equipped with three laundry tubs of concrete and a drying closet heated by steam, furnishes excellent facilities for bathers to wash and dry their undergarments.

The building is heated throughout by a system of steam coils suspended, as a matter of safety, out of reach of the bathers. Ample provisions for cleansing and disinfecting are made, and means are provided for flushing the walls and floors regularly with hot water. It is estimated that about sixty baths per hour can be given in the building. Soap and towels are furnished bathers free of cost. The total cost of this bath, including land and equipment, was \$14,800.

The following are the hours regulating the admission of male and female bathers: Week days, men and boys, 7 a. m. to 12 m. and 5 p. m. to 9 p. m.; week days, women and girls, 12 m. to 5 p. m.; Sundays and holidays (men and boys only), 7 to 10 a. m.

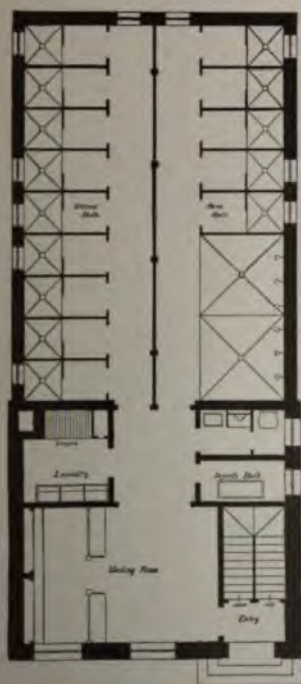
For the guidance of bathers as to their deportment the following simple rules have been printed in English, German, Polish, and Italian, and conspicuously posted:

1. Smoking prohibited.
2. Swearing or obscene language not allowed.
3. No intoxicated person allowed in building.
4. Walls, furniture, or property must not be defaced or injured.
5. Soiled clothing must be taken away by the bather.
6. Towels must be returned to the keeper or matron.
7. Unused soap must be deposited in a receptacle provided for that purpose.
8. No bather permitted to occupy a compartment more than twenty minutes.

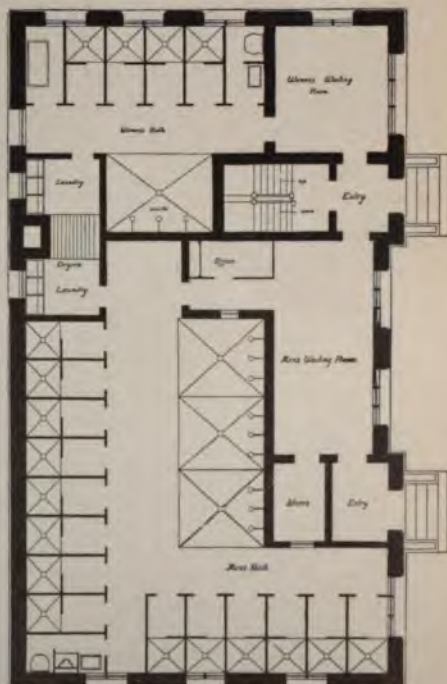
The immense popularity of this bath house among the poorer classes of the city's population and the fact that its capacity was being con-



Bath No. 1



Bath No. 1



Bath No. 2



stantly overtaxed led to the erection of a second one of much greater capacity in 1900. This is located at the corner of Woltz avenue and Stanislaus street, in the section of the city where the Polish population is densest, and like the first is entirely free. It contains 18 compartments, each fitted with a rain bath, and 12 open showers for children. There is also a porcelain bath tub for infants. Facilities for washing and drying underclothing are provided. The cost of the building and equipment was \$16,365, which, added to \$2,600 paid for the land, makes a total expenditure of \$18,965. It was first opened to the public on January 2, 1901, and the enormous patronage received by it has fully justified the outlay necessary for its erection.

The popularity of these houses and the immense service they are rendering is shown by the record of the number of baths given annually. Free Public Bath House No. 1 has the following record since its opening on New Year's day, 1897: Number of baths taken in 1897, 76,873; in 1898, 78,481; in 1899, 81,793; in 1900, 86,795; in 1901, 89,102, and in 1902, 77,675. The number of baths taken in Bath House No. 2 has been as follows: In 1901, 144,153, and in 1902, 116,975.

CAMBRIDGE, MASSACHUSETTS.

Previous to the year 1899 the only public facilities for bathing in Cambridge consisted of a small floating bath in the Charles River, maintained under the direction of the superintendent of buildings. In April of that year the structure was destroyed by fire, and to take its place provision was made for a bathing beach at Captain's Island, a portion of the Charles River parkway. It was the intention of the park commissioners to construct at this point a small, temporary beach, with only limited accommodations, but the immediate demand was so pressing that they felt compelled to enlarge upon their plans and to make more ample provision for bathing.

In June, 1899, work was begun on the beach at the foot of Magazine street. The beach as graded and constructed extended about 600 feet along the river front (Plate 149). An old stone building, formerly a State magazine, which had stood on the river bank since Revolutionary times, was completely remodeled and converted into a bath house, with 136 lockers, each 12 by 14 by 42 inches, arranged in two tiers on either side of the room. This house was reserved for the use of men and boys, while two iron voting booths were placed at one end of the beach for the accommodation of women and girls.

Owing to the swift current in this part of the river, life lines were so placed as to inclose the entire space occupied by bathers, and as an additional precaution the beach was patrolled by two life savers and a park police officer. A janitor was employed to look after the use of lockers in the men's bath house, while a matron preserved order and

helped the little ones with their clothes at the dressing rooms for women and girls. A large playground, suitable for baseball games and other athletic sports, was laid out on the improved area surrounding the bath houses.

The phenomenal use of the beach during this summer showed conclusively the necessity of providing larger accommodations, and plans were accordingly prepared for a further extension of the bathing area. During the following year, 1900, the beach was graded to a point farther up the river and its slope so diminished as to increase the number of hours when the depth of water was suitable for bathing. This gave it a total frontage of 850 feet, with a slope varying from 9 to 1 at the steepest part to 15 to 1 at the flattest.

Additional housing facilities have also been provided from time to time, the present plant consisting of separate locker houses for men, for boys, and for women and girls.

The following schedule of prices prevail:

Suit, towel, and locker accommodations	\$0. 10
Suit, towel, and dressing room	. 15
Dressing room without suit.....	. 10
Extra towels, each	. 03

The buildings are open to the public from 10 o'clock a. m. to 9 o'clock p. m. on week days and from 9 o'clock a. m. to 6 o'clock p. m. on Sundays. The beach is lighted with arc lights placed on poles in the water. Seats have been erected along the top of the beach at different points for the use of spectators. Two floats have been constructed and lifeboats provided. A feature of the recreation furnished during the past year was a series of water carnivals, consisting of swimming races of various kinds, etc.

This beach is one of the best of its kind and is exceedingly popular, as many as 60,000 persons having availed themselves of the bathing privileges in a single season. The accommodations are still inadequate and plans for a large modern bath house are now under contemplation.

CHICAGO, ILLINOIS.

Although free baths had long been a recognized public necessity in Chicago it remained for an organization composed of ladies of the city interested in philanthropic work, known as the Municipal Order League, to take the initiative in a crusade for their establishment. In March, 1892, a committee of three, consisting of Dr. Gertrude Gail Wellington, Dr. Sarah Hackett Stevenson, and Dr. Julia Lowe, was appointed by the league president, Miss Ada C. Sweet, to secure, if possible, public bath accommodations for their respective sections of the city. The first plan contemplated the erection of temporary bathing facilities to meet the increased demands incident to the



PLATE 149—CAPTAINS ISLAND MUNICIPAL BATH, CAMBRIDGE, MASSACHUSETTS



PLATE 150—TWENTY-FIFTH STREET BEACH MUNICIPAL BATH, CHICAGO, ILLINOIS



approaching World's Fair, but the idea was soon abandoned in favor of better and more permanent provisions.

The ladies of the committee and of the league worked early and late to arouse an interest in the subject of free baths by means of public meetings, articles in the press, and personal calls on members of the city council. Their perseverance and persistence were finally rewarded by an appropriation of \$12,000 made by the finance committee of the city council in March, 1893, and steps were at once taken to secure a suitable bath location on the West Side. A lot fronting on Mather street and measuring 25 by 110 feet was leased, and plans for a modern bathing establishment were prepared under the direction of Doctor Wellington, who had been assigned to this duty by Mayor Harrison. A further appropriation sufficient to cover the running expenses was obtained from the city, and on January 9, 1894, the first absolutely free permanent public bath in the United States and, so far as is known, in the world was opened to the public. The name of the newly elected mayor, Carter H. Harrison, was selected as a most appropriate one for the new bath.

The building, a handsome structure of pressed brick and brown-stone, 25 feet in width by 110 feet deep, is situated at 192 Mather street, in the midst of a district thickly populated by working people. A waiting room, 16 feet square, with seating capacity for 40 persons, occupies the front of the building. Beyond this are the bathrooms, equipped with 34 showers and 1 tub, and supplied with hot and cold water, soap, and towels. Combs, button hooks, and other toilet articles are provided. A laundry and two furnaces, one for heating the building and the other for heating water for the baths, are located in the basement.

Each bather receives on entering the waiting room a numbered check, indicating the relative order in which he may be admitted to the baths. Ten minutes are allowed for undressing and bathing, at the expiration of which time the water is turned off and the bather given fifteen minutes in which to dress and vacate the room. On two days of each week the baths are reserved for the use of women, girls, and small children with their mothers. On those days the temperature of the water is kept at 105°, while at other times it is 100°. The patrons of the bath are composed almost exclusively of working people of the neighborhood and their families. On the days reserved for females there is a large attendance of shopgirls. During the first year of the bath's operation it was patronized by 91,379 persons. In 1903 the number of baths given was 174,276, a gain of more than 90 per cent. The running expenses for that year were \$4,390.27, making a cost to the city of about 2½ cents for each bath given. The total cost of the building and equipment was \$16,699.40.

The original plans, as formulated by Doctor Wellington, called for 36 showers, dressing and waiting rooms, living apartments for the superintendent, coffee room, etc. Certain members of the league insisted, however, that a plunge be constructed, so the result was a compromise, by which the space was divided into 17 showers and a plunge 20 by 30 feet. The latter feature, owing to its small size and the aversion of most people to sharing so limited a body of water with others, was never popular with the bathing public, and was later superseded by additional showers and a tub.

Although the Carter H. Harrison Bath was erected under the auspices of the Municipal Order League, the credit for its establishment belongs in very large degree to one woman, Dr. Gertrude G. Wellington, through whose persistent efforts the necessary appropriation was secured and the work carried to a successful conclusion. Soon after the completion of this bath Doctor Wellington was requested by the chairman of the finance committee of the city council to proceed with the work for a bath on the South Side. Assisted by an able corps of volunteers from the league, she began her campaign, and in March of the following year obtained from the city an appropriation of \$12,000 for a second bath. A desirable piece of ground, 50 by 100 feet in size, was secured on Wentworth avenue, near Thirty-ninth street, in a locality inhabited chiefly by tenement dwellers with no better facilities for bathing than a kitchen sink. Here, after considerable delay occasioned by several alterations being made in the plans, a neat and commodious structure of pressed terra-cotta brick, with stone facings, was erected and opened to the public April 17, 1897. It was named the Martin B. Madden Bath, in honor of the chairman of the city finance committee, whose efforts in its behalf had been untiring.

The building is constructed of the best materials and is pleasing in design. Two entrances lead to the front part, which measures 30 by 49½ feet and contains a large waiting room and an office. The floors are of hard wood and the woodwork of oak, with oil finish. The bath wing proper is 25 by 100 feet in size and contains 32 bathing compartments, equipped with 31 showers and a tub. The compartments are divided into a shower room and a dressing room. The partitions are of slate, with nickel trimmings, the doors are of oak, and the floors of concrete. Two closets are provided. The basement contains a soup kitchen, a laundry, and a boiler room. The cost of the building, with its equipment, was \$15,361. The number of persons using the baths in 1903 was 120,647, of whom 100,369 were males and 20,278 females. The front of the building is so arranged that a second wing can be added similar to the one now built. This will double the capacity of the bath by providing a separate wing for each sex, thus obviating

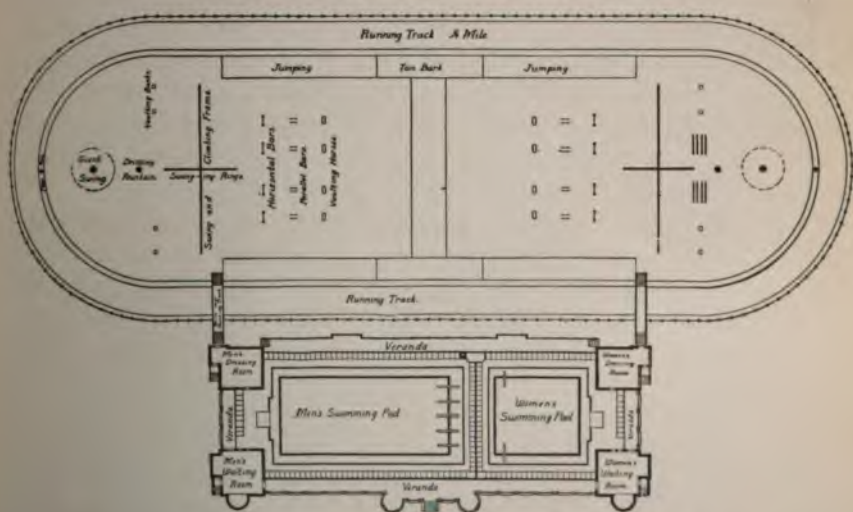


PLATE 151—DOUGLAS PARK MUNICIPAL BATH AND GYMNASIUM, CHICAGO, ILLINOIS



the necessity of men and women bathing on different days, as at present.

Shortly after the appropriation for this bath was secured, the Municipal Order League surrendered its charter and was succeeded by the Free Bath and Sanitary League, with Doctor Wellington as president. This organization consisted of a small working body of women, supplemented by an honorary membership of about 300 of the most prominent residents of the city. The success of the South Side bath being practically assured, the league next directed its efforts toward securing free bathing facilities for the North Side. The excellent beach along the borders of Lake Michigan within the confines of Lincoln Park offered an ideal place for summer bathing, and a movement was started to induce the park commissioners to allow and arrange for its use. The latter responded promptly and selected a convenient location where the conformation of the shore rendered bathing safe even for the smaller children. An inclosure was formed by stretching a cable around a row of piles driven for a distance of 175 yards about 70 feet out in the water in such a manner as to leave an exit only on the land side. Three of the largest pilings were provided with platforms and ladders, making capital diving stools for the boys. A part of the inclosure was separated from the rest by means of a strong line and reserved for the use of girls. The beach was formally opened July 17, 1895, and during the first month was patronized by over 90,000 persons. Later a bath house, with 54 rooms and a swimming pool 30 by 90 feet, was constructed. The present facilities consist of a wooden building erected in 1902 and measuring 30 by 179½ feet. Two double compartments, one for girls and one for boys, each with separate entrance and containing a shower bath and a water-closet, are provided. These are used merely as dressing rooms and are free to all, the only charge made being 5 cents for use of bathing suit. The building was erected at a cost of \$4,196.95, and \$330 additional was expended for suits, towels, trunks, and other equipment. Two watchmen on the beach and two women attendants are employed. The beach is open from June to September. In 1903 the income from rent of suits was \$313, while the total cost of maintenance and operation was \$1,032. During that year it was necessary to more than double the supply of suits. The number of baths given was estimated at 60,000.

The park commissioners hope to build in the near future in Lincoln Park an immense bath house, with swimming pools, rain baths, etc., to be larger and better than any now in existence in the city.

An open air gymnasium and natatorium (Plate 151) has been constructed in Douglas Park, near Albany avenue, at a cost of \$46,692.45, exclusive of miscellaneous work performed on the surrounding property. This improvement was dedicated to the public on August 22, 1898.

was \$3,782.37, and the number of baths given was 97,505, of which 81,983 were given to males and 15,522 to females. Plans have recently been made for an addition which will double the capacity of this bath house.

The South Side park commissioners have constructed a natatorium at McKinley Park, which was first opened in the summer of 1903. This consists of a one-story building 180 feet in length by 108 feet wide, constructed of dark granite concrete so treated as to have the appearance of natural granite. Two large rooms, one at each end of the building, contain 206 dressing booths for the bathers. Between these two rooms are the check rooms, the waiting room, and an open court, around which runs an Ionic colonnade supporting boxes of flowering plants. A shower house in the center of this court is fitted with 14 showers for the use of bathers before entering the swimming pool. The latter is located just in the rear of the building and is surrounded by a sand beach 15 to 20 feet in width, around which is placed, a short distance away, an iron fence. The pool measures 150 by 300 feet and is supplied with heated water from a large boiler room near by. Males and females are admitted to the pool on different days. The total cost of this plant was about \$40,000, and during the summer of 1903 the expense of operation amounted to \$6,489.77. The number of persons availing themselves of the bathing privileges during this period was 89,122, of whom 14,794 were females.

The most recent addition to the public bath system of Chicago is the Kosciusko Bath, opened in January, 1904. This is an all-the-year bath, equipped with 20 showers and 20 dressing rooms, and housed in a building of brick and terra cotta costing \$14,800.

In addition to the baths described above there are three free bathing beaches, located on the lake front at the foot of Twenty-fifth street (Plate 150), Seventy-ninth street, and Oakley avenue. The first of these has a wood bath house with 54 dressing rooms—36 for men and 18 for women—erected at a cost of \$500. In 1903 the attendance at this beach was 201,408, of whom 190,690 were males and 10,718 females. At the Seventy-ninth street beach two canvas tents, one for each sex, were utilized as dressing rooms by 82,260 persons, 21,135 of the number being females.

With regard to the permanent bathing establishments of Chicago it is said that

These baths have not been established as places of diversion or pleasure, but are intended to promote habits of personal cleanliness by enabling those who are not provided with bathing facilities at their homes or places of lodging to observe the fundamental rules of health and sanitation.

During the summer season there are demands upon all the baths far beyond their capacity. The beneficiaries are of all ages, from infants in arms to octogenarians; school children and workingmen predomi-

note. At all seasons there is a growing demand for their use by workmen after hours, so that the baths are now kept open exclusively for workmen every Saturday night all the year round and on Wednesday nights in addition during the warm season. All baths are absolutely free to the people. At each of the baths two days of each week are set apart for the exclusive benefit of women and girls.

An average of twenty minutes is consumed in the time allowed for each batch of bathers. Of this seven to eight minutes are spent under showers, with the water from the sprays in full force. The remainder is allowed for undressing and completing the toilet after the water is turned off. By following this programme the showers are filled and emptied once during every half hour of the time they are open to the public.

At the present time there are in operation in the city 7 permanent baths, 2 natatoriums, and 4 bathing beaches, all of which are entirely free. In addition to these, plans are now being formulated for the construction of bath houses in each of the seven small parks under the control of the South Park board of commissioners, while the city has already taken the initiative for the establishment of 3 more all-the-year baths.

CLEVELAND, OHIO.

The park department of Cleveland has under its supervision two summer beach baths, which in 1903 were used by over 28,000 persons. The smaller of these is located at Edgewater Park and is largely patronized by children. It was first opened in 1895 and cost, including land, about \$3,000. It contains 80 dressing rooms, but is not provided with shower baths or hot water. The income from the rent of suits, towels, and dressing rooms in 1903 was \$686.15, while the operating expenses were \$1,035.57. The number of persons using the building in that year was 9,088. The attendance at this place would doubtless be much larger but for the presence of a large private bath house in the neighborhood, which is patronized by many in preference to the municipal establishment.

The second public bath is at Gordon Park, and consists of a large frame structure well equipped and fitted out and having an ample pavilion and refreshment room attached. It was built in 1902 and for a short time was entirely free to all persons, but in 1903 the abuse of this privilege by an undesirable class of bathers led to a charge of 5 cents being made for the use of a room and towel or 10 cents for a towel, room, and suit. During the summer of 1903 the total number of bathers at this place was 19,070, not including those who were admitted free of charge at the beginning of the season. Free instruction in swimming is provided. The building contains 450 dressing closets for the use of bathers, in addition to separate waiting rooms for males and females. There are no shower baths and no hot water is furnished. The cost of the house, with its equipment, was \$18,000.

The total cost of maintenance in 1903 was \$2,132.16 and the was \$1,495.65.

In addition to its summer bathing facilities the city now possesses a very complete and up-to-date establishment in which warm baths may be had the year round. This is located on Orange street in a thickly populated district, and consists of a handsome building of pressed brick and stone, comprising two stories and a basement, costing, with land, \$28,100 (Plate 152). The ground floor contains bath accommodations, which consist of 37 showers and 2 tubs, a most approved pattern, with ample dressing space connecting each. Separate baths and waiting rooms are provided for each sex. The second story is designed for use as a gymnasium, equipped with the most approved apparatus, at the expense of \$5,000 and placed in charge of competent instructors. The basement is used as a public laundry and is fitted with stationary wash tubs, closets, and other conveniences for those who lack proper facilities at their homes.

This establishment has but recently been put into active operation and as soon as its success is definitely assured steps will be taken for the erection of another similar in design.

DES MOINES, IOWA.

The city of Des Moines maintains a small public bath, from the income for the fiscal year 1901-2 was \$1,063 and the cost of operation \$800. The value of the property and equipment is \$1,938.

DETROIT, MICHIGAN.

A public bath house, maintained by the department of parks and boulevards of Detroit, is located on the river beach within the grounds of Belle Isle Park. The building is of wood and measures 100 feet in length. It was erected in 1894, at a cost of a little more than \$16,000, and is provided with waiting rooms, dressing rooms, a locker office, toilet rooms, and living apartments for the superintendent. There are three departments—one free and two in which bathers are charged a small fee. The first of these is for males only and consists of a single large dressing room, in which is placed a number of benches and roller towels. The second department is similar in all respects to the first, except that here each bather is provided with a locker in which to place his clothing and for which a fee of 5 cents is charged. The remaining department, which is patronized by both sexes, consists of dressing rooms and towels may be had on payment of a fee of 10 cents. No charge is made for the use of bathing suits.

The bath house contains 87 dressing rooms for males and 87 for females, in addition to which are 85 lockers for the use of males.





shower baths or tubs are provided. Bathing is done in four large basins located on the river beach and separated by walks patrolled by men whose duty it is to render assistance in case of accident.

During the summer of 1902 the total number of baths given was 46,204, of which 12,121 were free and 34,083 for pay. Of those who paid 4,863 were females and 29,220 were males. The receipts for this period were \$2,864, while \$2,300 represented the cost of maintenance and operation.

HARTFORD, CONNECTICUT.

The city of Hartford maintains two floating baths in the Connecticut River that are open to the public about five months in the year and that are much appreciated by the poorer classes. The first was built in 1897 and is reserved for the use of males, while the other, opened in 1900, is for the accommodation of women and children. These baths are simple but substantial structures, costing about \$4,000 each, and equipped with 36 dressing rooms and a swimming tank 23 by 48 feet. They are anchored in the river, a short distance from the bank, and are reached through one of the public parks. Two superintendents and a matron, with salaries aggregating \$730 per season, are employed. During the winter months, when the houses are out of commission, they are towed down the river to a point below the city, where they are preserved from damage by wind and storm.

The average attendance per day during the summer of 1901 was about 500 males and 400 females. The total attendance for the season was estimated at 82,800 persons, while \$2,473.27 was needed to defray the cost of operation.

The Hartford board of health has under consideration the plan of establishing a number of permanent shower baths in different parts of the city, and it is probable that ample bathing facilities will soon be within the reach of all.

HOBOKEN, NEW JERSEY.

The public bathing facilities of Hoboken consist of a floating bath in the Hudson River at the foot of Fourth street and in front of one of the public parks. This structure was erected about fifteen years ago, at a cost of \$11,000, and consists of a two-story frame building resting on two pontoons, with a swimming pool in the center and dressing rooms around the sides on both floors. There are 150 of these dressing rooms in all. An office and a storeroom are also part of the equipment.

The bath house is open from June 1 to October 1, and no charge whatever is made for its use. Bathing hours are from 5 a. m. to 10 p. m., Tuesdays and Fridays being reserved for women and children. Instruction in swimming is provided by a capable teacher. The cost

of maintenance and operation for 1902 was \$1,500, and the number of baths given was estimated at 45,000. The average daily attendance was about 500 males and 100 females.

HOLYOKE, MASSACHUSETTS.

The first public bath in Holyoke was erected in 1899 as the result of a resolution passed by the board of aldermen appropriating the sum of \$1,500 for an establishment in which the poor of the city might enjoy free bathing privileges during the heated season. The author of this measure, which paved the way for the opening of other bath houses later, was Moritz Ruther. The bath is located on a leased lot and was constructed at a cost of \$1,272. The immense popularity of this bath led to the erection of another in the Second Ward in 1901 and two during the following year in Wards 1 and 4. All are constructed of wood and are built on land leased by the city. Each building is equipped with two shower baths and a swimming tank 20 feet wide by 50 feet long and with a depth of water varying from 2 to 4½ feet. No bath tubs are provided and only cold water is used. There are also in each house an office for the keeper, a storeroom, a water-closet, and 33 dressing rooms, each 3 by 4 feet. The total cost of the four baths with their equipment was \$6,207 and the expense of operation averages about \$300 each per year. During the summer of 1902 the attendance at the four houses was estimated at 40,000 persons, of whom about one-fourth were females. At three of the baths one day of each week was set apart for women and girls, while in Ward 4 the demand was so great that two days per week were allowed them. The following rules were formulated by the board of public works for the government of the baths:

1. The bath-house keeper shall, under the board of public works, have exclusive control of the house and surroundings, and his decision in any matter of dispute, either as to the right to closets, dressing rooms, or length of time in the tank, shall be final, and any person resisting said authority shall be ejected from the building and shall not for the period of two weeks, or longer if the keeper so elects, be permitted to use said house.

2. No person under 15 years of age shall remain in the water longer than fifteen minutes, and shall as soon as possible after leaving the water vacate the dressing room, leaving the door open and the key on the hook provided for that purpose.

3. The bath-house keeper shall assign bathers to their room, and they will keep the key to the dressing room until they are through using it.

4. The bath house will be open from 9 o'clock a. m. till 1 o'clock p. m., and from 3 o'clock to 6 o'clock p. m., and from 7 o'clock till 9 o'clock p. m. each week day. Sundays the house will be open from 6 o'clock to 9 o'clock a. m.

5. There shall be a woman's day each Wednesday afternoon from 2 o'clock till 6 o'clock and from 7 o'clock till 9 o'clock, during which time there shall be a woman attendant. During this time the bath house shall be closed to all other persons.

6. The use of soap in the tank will not be permitted.

7. Bathers will be required to provide their own trunks and towels.

8. Not more than 30 bathers will be allowed in the house at one time.

9. No one will be permitted to lounge upon the railings or to climb upon them from the tank; neither will they be allowed to plunge from them into the tank.

10. Any person detected in entering the building after hours, throwing stones, or in any way damaging the building or endangering the safety of persons in or about the building, will be dealt with according to law.

11. Swearing, boisterous talking, quarreling, or any loud disturbance whatever is strictly forbidden, and any boy detected will be immediately ejected, not only from the building, but from the street and vicinity thereof, and will not again be permitted to use said building. Loitering or loafing about the building will not be permitted under any conditions.

12. The foregoing rules will be strictly enforced in every particular.

KANSAS CITY, MISSOURI.

An indoor public bath was opened in Kansas City in 1901. It is located at Seventeenth street and the Paseo, on the Parade Park, and consists of a structure of cement and stone, in which 10 showers and a swimming pool 40 by 60 feet have been placed. There are also 40 dressing rooms for the use of bathers. Only cold water is used, and no bath tubs are provided. The bath is open only during the summer months, and two days out of every week are reserved for females. Bathers bringing their own suits have the free use of the baths, while others are charged a fee of 5 cents. The capital cost of the plant, including betterments, was \$12,000. In 1902 the baths were used by 33,524 males and 3,156 females. The income from rent of suits for that year was \$219.20, while the cost of operation was \$715.50.

LOUISVILLE, KENTUCKY.

An indoor municipal bath is in operation in Louisville, under the immediate supervision of the board of public works. It is situated on Preston street, between Market and Jefferson streets, and was first opened to the public on May 1, 1902. The building is of brick, equipped with separate baths and waiting rooms for the two sexes. No separate dressing rooms are provided, the large bathing compartments affording ample space. The bathing facilities consist of 12 showers and 2 small bath tubs supplied with hot and cold water.

The cost of this bath, with its equipment, was \$4,000, not including \$1,400 paid by the city for the land upon which it is located. From

the date of opening to December 31, 1902, there were given 10,180 free baths to males and 3,959 to females—a total of 14,139. The expense of operation during this period averaged about \$120 per month.

MILWAUKEE, WISCONSIN.

The natatorium opened on the West Side in Milwaukee in the year 1890 was, as far as known, the first all-the-year public bath which provided facilities for swimming as well as for shower baths. The initial cost of this structure, exclusive of land, was more than \$23,000, and no expense was spared to make it thoroughly up-to-date and complete in every respect. It is a substantial brick building containing 108 individual and 4 general dressing rooms, and equipped with 18 showers and a steel swimming tank 33 by 83½ feet. An abundance of hot water is supplied to both tank and showers. Living apartments for the superintendent are found in the building.

No charge is made for bathing privileges. The superintendent has a supply of suits, towels, and soap, which he procures at his own expense, and which he rents to bathers who fail to bring such articles with them. During the year ending December 31, 1902, baths were given to 315,380 males and 19,790 females at a total cost to the city of about \$6,000.

A second public bath, the South Side Natatorium, was opened in 1895. This is also constructed of brick and is provided with 15 showers or sprays, 7 tubs, and a cement tank measuring 30 by 80 feet, all being supplied with hot and cold water. There are also 56 dressing rooms each capable of accommodating several persons at a time. Bathing apparel and towels may be hired of the superintendent for a small consideration, but most persons prefer to furnish their own suits. The total cost of this bath, including land, was \$31,246.36, and the operating expenses amount to about \$5,000 per year. In 1902 the number of persons using the baths was 232,455, of whom about 85 per cent were males.

The North Side Natatorium, the most recent addition to the city's public bathing facilities, was erected in 1903. It consists of a handsome brick building, furnished with 20 shower and 6 tub baths, in addition to a swimming pool of cement, with dimensions of 27 feet 10 inches by 77 feet 10 inches. Provision is made for 38 dressing rooms for the use of bathers and a suite of living rooms for the superintendent. This bath, like the other two, is open all the year, and is supplied with hot and cold water. The total cost of the building and equipment was about \$50,000, while \$5,500 additional was paid for the land upon which it is located.

For the guidance of visitors to the natatoriums the following rules and regulations have been prepared and conspicuously posted:

Rule 1.—The natatorium will be open to the public for bathing from 6 o'clock a. m. to 12 o'clock m., and from 2 o'clock p. m. to 9 o'clock p. m., during the months of June, July, and August. During the remaining months of the year the opening hour will be 9 o'clock a. m.

Rule 2.—The natatorium will be closed from 12 o'clock noon on Sundays until the opening hour on the following Tuesday.

Rule 3.—The use of the natatorium on Wednesdays and Fridays will be reserved for females.

Rule 4.—Boys attending school will be permitted to bathe from 4 to 6 o'clock p. m. during the school season, and during vacation every Thursday and Saturday afternoon. This rule will also apply to school girls on the respective days reserved for females.

Rule 5.—Bathers unable to swim before entering the basin should ask the superintendent or other person in charge to instruct them in regard to the shallow-water limits.

Rule 6.—Bathers will not be allowed to occupy the basin or bath-rooms for a period exceeding thirty minutes each day, and after the numbers of their dressing rooms have been called by the gong, must dress and vacate same within fifteen minutes.

Rule 7.—Persons having skin diseases or ulcerations must confine themselves to the use of the shower baths only.

Rule 8.—The use of soap in the basin is strictly forbidden.

Rule 9.—All persons should make use of the shower baths before entering the basin.

Rule 10.—Gentlemanly behavior will be insisted upon at all times, and any misbehavior or violation of the rules will be punished by expulsion from the building.

Rule 11.—Profane or boisterous language, hallooing, whistling, the use of tobacco, spitting in the basin or on the floors, writing on the walls, and unnecessary splashing of water are strictly forbidden.

Rule 12.—Any injury or defacement of the property of the natatorium will result in the arrest and legal prosecution of the offender.

Rule 13.—No person will be permitted to enter the baths unless decently attired. Parties not in possession of bathing suits or towels can rent the same at the office.

Rule 14.—Bathers must assume all risk of loss of property not deposited at the office.

Rule 15.—Diving, or jumping from the galleries, tie rods, or trusses is strictly prohibited.

With regard to the practical utility of these bathing establishments, the secretary of the board of public works of Milwaukee, Mr. V. J. Schoenecker, states that "experience has taught us that the greater the number of shower baths in the natatorium the better they are appreciated by the public.

In addition to its permanent baths, the city has recently erected a number of wooden booths along the shores of Lake Michigan, where excellent bathing may be had during the summer months. Nine of these booths, containing 10 rooms each, have been placed at convenient intervals along the beach, where they are proving of great benefit during the heated term. The entire cost of these structures was about \$2,000, and the expense of maintenance averages about \$700 per year.

There is also a bath house located on the Milwaukee River which up to 1902 was conducted as a private enterprise. In the summer of that year it was leased by the city at an annual rental of \$1,000, and was thrown open to the use of the public. It consists of a frame structure, equipped with 2 rain baths and 81 dressing rooms. The total attendance at this bath during the months of July, August, and September, 1902, amounted to about 82,000 persons.

MINNEAPOLIS, MINNESOTA.

A portable wooden bath house was erected by the board of park commissioners of Minneapolis on the beach at Lake Calhoun during the summer of 1901. The building consists of several sections or compartments placed end to end, and is so arranged that it can be taken down and stored during the winter. It is $11\frac{1}{2}$ feet wide by 306 feet in length and is provided with 100 dressing rooms for the use of bathers. The open lake in front of the bath house offers an excellent place for outdoor bathing, and during the heated term the daily attendance here is quite large. The charges for bathing are as follows:

Bathing suit, towel, and dressing room.....	\$0.20
Towel and dressing room.....	.10
Children's trunks and dressing room.....	.10
Children's trunks.....	.05
Checking bicycles.....	.05
Care of bathing suit for season.....	2.00
Boys with their own trunks or suits in public room.....	Free.

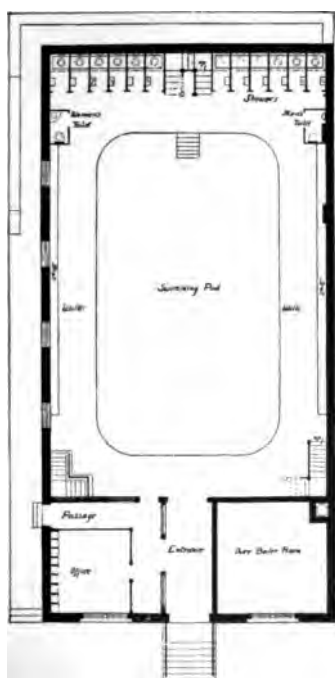
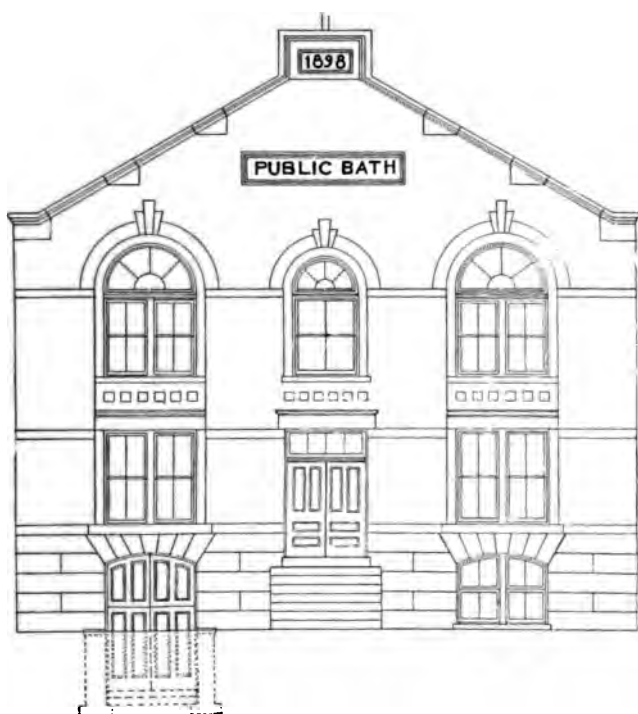
Boys over 15 years old will not be allowed to wear trunks.

The cost of the building was \$3,000, and \$500 additional was expended for bathing equipment. The operating expenses for the summer of 1902 amounted to about \$800, while the total number of bathers was estimated at 41,000. Of this number about 35,000 were males and 6,000 females. The income from rent of suits, etc., was \$593.

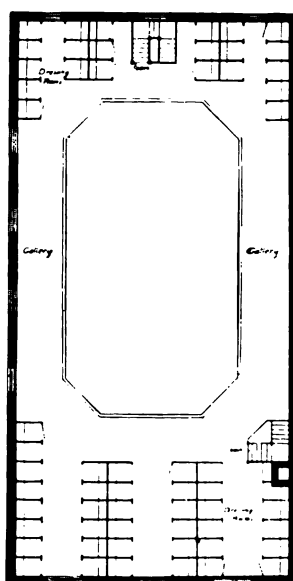
A movement for the establishment of a permanent public bath in Minneapolis has already been started, and it is quite probable that the city will soon be provided with bathing facilities far superior to those now available.

NEWARK, NEW JERSEY.

Newark has three indoor baths which are open to the public about seven months in the year, and which are very popular with all classes of the people. The first of these was erected in 1896, in response to the demands for bathing facilities to take the place of the floating baths in the Passaic River, which, owing to the contaminated state of the water, had been discontinued. This bath is located near the center of the northern section of the city, and is known as the Summer Avenue Bath House. It is constructed of brick, with brownstone



First-floor plan



Second-floor plan



trimmings, and is furnished with 33 dressing rooms and a swimming pool 17 by 75 feet in size. The total cost of this bath was \$14,500, of which \$13,000 was paid for the building and equipment and \$1,500 for land.

The Walnut Street Bath, in the eastern part of the city, was opened in the spring of 1897. This is a brick structure costing, with land, \$17,500, and containing 35 dressing rooms, 8 shower baths, and a swimming tank 25 feet wide by 50 feet long, and with a depth varying from 3 to 6 feet.

In July, 1902, a third bath was opened on Morris avenue, in the western portion of the city. This is a two-story building of brick and stone, with slate roof, and was erected at a cost of \$18,000, exclusive of land (Plate 153). It is equipped with 12 spray baths, 59 dressing rooms, and a cement swimming pool, measuring 28 feet wide, 50 feet long, and from 4½ to 5½ feet deep.

All three baths are modeled after the same style, both inside and outside, and in general appearance are very much alike. They are open to males four days in the week, and to females two days. The usual bathing hours are from 9 to 12 in the forenoon, and from 2 to 5 in the afternoon. Workingmen and others unable to bathe during the day are admitted between 6.30 and 8 o'clock in the evening. In extremely warm weather the baths are open to men and boys from 7 to 10 a. m. on Sundays. Each bath employs two superintendents and a fireman. There is also a matron who has entire charge on the days reserved for women and girls. The water in the swimming pools is kept uniformly at about 80° F., while persons using the showers can regulate the temperature to suit themselves. The pools are emptied and thoroughly cleansed once each day. Bathers who bring suits and towels are admitted free, while those who do not are charged a fee of 5 cents for the use of these articles, or 10 cents if a dressing room be included. Instruction in swimming is provided by competent teachers. The superintendents and other attendants are instructed in the treatment of the apparently drowned, and also life lines are stretched around the pools for the assistance of bathers in distress.

The number of persons using the baths during the year 1902 was 129,778, of whom nearly 90 per cent were males. The income from rent of suits, towels, rooms, etc., was \$511.10, and the expenditures for maintenance and operation \$4,444.79.

NEW BEDFORD, MASSACHUSETTS.

The city of New Bedford expended for the maintenance of a small public bath during the year ending December 31, 1901, the sum of \$813. The estimated value of all bathing property reported for that year was \$1,600.

NEWTON, MASSACHUSETTS.

Under the direction of the local board of health the city of Newton maintains two public bath houses on the Charles River, their total value being about \$700. The first of these was opened in 1890 and the other in 1898. Both are constructed of wood, one being located on the beach, while the other is a floating bath in the river. The latter is provided with a swimming pool 20 by 50 feet in size. One house contains 28 dressing rooms, the other 20. Males and females are admitted to each at different hours. These baths are open from June 15 to the middle of September, and during the summer of 1902 were used by 6,727 people. The total expense of maintenance for that year was \$292.15. A merely nominal charge was made at one bath for the use of towels, tights, etc., while at the other house bathing was entirely free.

NEW YORK, NEW YORK.

The question of providing adequate bathing accommodations for the poor of New York City is by no means a recent one. As early as 1852 the New York Association for Improving the Condition of the Poor expended \$42,000 in erecting a public bath for the benefit of the working people of the city. This building was located on Mott street, near Grand, and, according to the reports of the association, was well patronized for a number of years. About 1860, however, its patronage began to decline and it was soon afterwards discontinued.

In 1870 two floating baths were constructed by the city at convenient points on the river front, where they soon became so popular that additional facilities had to be provided, and in 1874 four more houses were opened. These were followed from time to time by others until, in 1888, there were 15 baths of this kind in operation within the city limits. Since that date no new floating baths have been established, popular attention having been directed more toward the subject of all-the-year bath houses. In 1890 Dr. Simon Baruch, who had investigated the working of the public rain bath in Germany and other European countries and had earnestly advocated the introduction of the system into the larger cities of the United States, was invited by the Association for Improving the Condition of the Poor to appear before that body and explain to its members his plan for the construction of a bath of that character. As a result of his information plans were immediately prepared by the association for a building at 9 Center Market place, and in the following year the People's Bath was completed and at once became a great popular success. Shortly after the opening of this establishment the trustees of the Baron de Hirsch, after a conference with Doctor Baruch, decided to employ the system in a bath to be erected at the corner of Henry and Mar-

ket streets, in a district inhabited largely by Hebrew working people. This bath, though frequented chiefly by German, Polish, and Russian Jews, is open for the poor of all nations and creeds, and is greatly appreciated by those having no conveniences for bathing at their homes. About the same time there was also built the De Milt Dispensary Bath, equipped with six showers and a tub, which charges bathers 5 cents each with soap and towel furnished.

In February, 1895, the Riverside Association, a chartered body having for its object the betterment of living conditions among the poor, opened a public rain bath at 259 West Sixty-ninth street, where bathing privileges, with towel and soap, may be had at a cost of 5 cents. Among other efforts made by various charitable organizations for the provision of bathing facilities for the masses, may be mentioned the Floating Hospital of the St. John's Guild, established in 1887, which gives free salt-water baths to thousands of women and children during its summer trips on the bay; the Wayfarers' Lodge, on West Twenty-sixth street, which furnishes a bed only on condition of a bath being taken, and the Lodging House for Homeless Men, maintained by the Department of Public Charities, where bathing is made compulsory for every guest.

While the city has thus for a number of years been provided with indoor baths conducted under the auspices of different philanthropic societies, the introduction of free municipal baths of this character is a comparatively recent undertaking. In 1884 a commission appointed to inquire into the condition of tenement houses in New York City recommended the establishment of free winter baths throughout the tenement-house districts, but no action was taken in the matter by the city authorities. The tenement-house committee of 1894, after a most careful investigation of the subject, submitted the following conclusion:

That, in addition to free floating baths maintained in the summer months, the city should open in the crowded districts fully equipped bathing establishments, on the best European models, and with moderate charges.

The committee makes the above recommendation in the interest of the public health. Hundreds of thousands of our population are without sufficient bathing facilities, while it is evident that the bathing habit increases among them in proportion to the opportunity afforded. The baths now maintained by benevolent organizations at small charges are principally rain baths. The bathing habit abroad has been greatly increased, owing to the popularity of the swimming baths, and it is believed that municipal establishments here will be more successful in accomplishing their purposes if swimming baths be included in their arrangements.

The committee of seventy, an outgrowth of the citizens' movement of 1894, also recommended that adequate bathing facilities be provided for the promotion of public health and comfort.

As a result of the popular agitation of the question, both in New York City and in other parts of the State, an act was passed by the State legislature in 1895 amending the law of 1892 relating to public baths and making its provisions mandatory. This act provides that--

All cities of the first and second classes shall establish and maintain such number of free public baths as the local board of health may deem to be necessary. Each bath shall be kept open not less than fourteen hours for each day, and both hot and cold water shall be provided. The erection and maintenance of river or ocean baths shall not be deemed a compliance with this section. Any city, village, or town having less than 50,000 inhabitants may establish and maintain free public baths, and any city, village, or town may loan its credit or may appropriate of its funds for the purpose of establishing such free public baths.

The author of this important measure, as well as that of 1892, was the Hon. Goodwin Brown, of Albany, who, with Dr. Simon Baruch and other ardent advocates of sanitary reform, had labored incessantly in the interest of free baths for the multitude. Soon after the enactment of this law Mayor Strong appointed a committee to investigate the question of public baths, with a view to providing a suitable system for the city. This committee, after a thorough investigation of conditions both at home and abroad, recommended the establishment of permanent public baths equipped with showers and tubs and located at points easily accessible to the tenement-house districts. In 1896 legislation was obtained authorizing the city to expend \$200,000 in the construction of public baths and comfort stations, and in September of the following year work was commenced on a building on Rivington street. This bath was not formally opened to the public until March 29, 1901, thus requiring three and one-half years for its completion. As to the circumstances leading up to the establishment of this and subsequent baths Mr. Frank J. Helmle, superintendent of public buildings and offices, of Brooklyn, writes as follows:

In March, 1898, a large meeting of residents of the lower east side of Manhattan was held in the University Settlement at Rivington and Eldridge streets to agitate the question of public baths throughout the city. Appropriate resolutions to this end, for presentation to the mayor, board of aldermen, board of estimates, and the comptroller, were passed at that meeting. These resolutions recited the general uncleanness of the crowded city, and especially the east side, and emphasized the necessity for adequate bathing facilities. The New York Association for Improving the Condition of the Poor instituted this meeting, and the Rivington Street Bath, Manhattan, was the result. Later on the citizens' committee of the Citizens' Union held various mass meetings in Manhattan and Brooklyn to urge the necessity of erecting public baths in the congested districts throughout the city. Finally, at a meeting held by the Citizens' Union at Pacific Hall, Manhattan, Mr. Robert Fulton Cutting presiding, it was agreed to petition the municipal authorities to provide sufficient money for the erection of

six free interior baths in New York City. Later, the Society for Improving the Condition of the Poor joined with the Citizens' Union in this request and submitted to the municipal authorities plans for the erection of a series of bath houses, half on sites 25 by 100 feet and half on sites 50 by 100 feet. The total cost of about 16 bath houses and sites under the first plan was estimated at \$962,072 and under the second plan at \$1,782,600. Both plans contemplated two-story buildings, with about 58 shower baths and several tubs. Before anything of a definite character was done by the authorities toward realizing these projects the movement was taken up by the Brooklyn branch of the Citizens' Union and mass meetings to promote the project held in the various districts of this borough. As a result of this agitation and the efforts of a number of local charitable organizations, the board of estimate and apportionment, in September, 1902, appropriated \$480,000 for erecting five interior public baths—\$300,000 for the Borough of Manhattan and \$180,000 for the Borough of Brooklyn. Subsequently the whole appropriation was increased by another \$50,000 because of the fact that desirable sites could not be obtained at the figure originally estimated and included in the first appropriation.

FLOATING BATHS.

The Borough of Manhattan maintains at the present time 15 floating baths, which are located at convenient points along the river front, affording much relief to the poor of the tenement-house districts during the heated season. These baths are plain wooden structures, about 64 feet wide by 94 feet long. The swimming space is about 40 feet wide by 70 feet long, and around this are arranged 63 dressing rooms and a toilet room, besides an office for the watchman. Rooms are also provided above the main floor for the watchman, who sleeps in the bath house. These structures are floated by movable watertight compartments placed under the platforms and dressing rooms around the swimming pool. The compartments are made of pine calked with oakum, the joints being covered with asphaltum. They are 6 feet deep, 6 feet wide, and differ in length, the largest being 20 feet long. The water enters the pool through 1½-inch openings between the slats forming the floor and the depth of water in the pool is usually about 5 feet. In some houses provision is made for two pools, a deeper one for adults and the larger children, and a smaller and shallower one for small children. The water in the smaller pool is about 3 feet in depth. A roof projects over the dressing rooms and platform around the pool, but does not extend over the pool itself. A set of plans of a floating bath similar to the above is given on page 1306.

These floating baths are open from the middle of June to the middle of September and are entirely free to all bathers. Twenty minutes are allowed for bathing and ten minutes for dressing, time being announced by a gong. The daily hours are from 5 a. m. to 9 p. m., except on Sunday, when the baths are closed at noon. Women and children have the exclusive use of the baths on three days of each

week, at which time two female attendants and a life guard are in charge. On other days there are two male attendants at each bath. A policeman to preserve order and a night watchman are also employed at each house. Free instruction in swimming is given by competent teachers furnished by the city board of education. As a precaution against infectious diseases no bathing suits or towels can be had at the baths, bathers being required to supply themselves with these articles. The average cost of each bath was \$12,500, and the annual expenditures for the maintenance of the fifteen baths, including salaries and supplies, amount to about \$36,000. The total number of bathers at these places during the summer of 1902 was estimated at 5,200,000.

In recent years the increased amount of sewage discharged into both the North and East rivers has rendered it very difficult to obtain sanitary locations for these baths, and it is only a question of time when they will have to be discontinued entirely. In 1902 sites could be obtained for only ten, all available dock spaces along the city front having been leased by the former dock board either to steamship companies or to private persons for speculative purposes. Many of the baths have been in use for so many years that they are in a very dilapidated condition and need extensive repairs, or in some cases to be replaced by entirely new structures. In many instances the board of health has condemned the locations formerly occupied by these baths, so that it has been necessary to double them at certain points, where one house can now be reserved exclusively for females during the entire week and the other for males.

RIVINGTON STREET BATH.

The Rivington street bath, the first of the new system of free municipal baths to be opened, is located in a particularly poor and crowded part of the city, where its capacity is daily taxed to the utmost. The building is a pretentious brick structure, 78.8 by 84 feet, which cost \$100,000, including equipment. The land upon which it is situated was acquired by the city under the terms of an old charter, and represents no outlay of capital. The bathing facilities consist of 45 showers for males and 22 for females, besides 5 bath tubs for the use of each sex, making a total capacity of 77. No swimming tank is provided.

There are 67 dressing rooms for the use of bathers, one adjoining each shower cabinet. The floors of the latter are depressed and are provided with drains for carrying off the water in the usual manner. Living apartments for the superintendent and a laundry for the care of towels are also found in the building. The bath is open all the year and is supplied with hot and cold water. The usual daily hours are from 7 a. m. to 8 p. m., but on Saturday the bath is opened an hour earlier, while on Sunday it is closed at noon. The time allowed for each bath is *limited to twenty minutes*. Bathers must take their regular turn and

are not permitted to fee the attendants. In 1902 the total number of persons using the bath was 776,917, of whom 521,805 were males and 255,112 females. The cost of maintenance for that year was \$34,000, including salaries of attendants.

In 1902 contracts were let for the erection of three additional public baths in the Borough of Manhattan--two on the eastern side of the city and the third on the western side. The first of these is located at 243-247 East One hundred and ninth street, near Second avenue, and occupies a plat of ground 60 by 100 feet in size. The cost of the building, with its equipment, was \$108,630, while \$19,000 additional was paid for the land upon which it stands. The second bath is at 133-135½ Allen street, near Rivington street, on the lower East Side, and will cost, when complete, \$91,500. The price paid for the site, which measures 50 by 87.6 feet, was \$34,000. The location of the West Side bath is at 347-349 West Forty-first street, near Seventh avenue, where a lot 50 by 100 feet has been secured at a cost of \$33,750. The contract price of this bath, including equipment, is \$100,873 (Plate 154).

All three of these baths are constructed of brick, stone, and iron, and are built in accordance with a plan submitted to the municipal authorities by the New York Association for Improving the Condition of the Poor.

This plan provides for a building with basement, main floor on level with the street, and second story extending back about half the depth of the building. The basement is used for the steam plant, heating, lighting, and ventilating apparatus. The main floor on street level is divided equally as to bathing compartments between men and women. The waiting rooms are unequal, that for men being larger than that for women, experience having shown that in the busy hours there are more men waiting for their turn than women. The bathing capacity of the main floor is as follows:

For men, 29 showers, 3 tubs (3 water-closets, 2 urinals, 1 basin).

For women, 29 showers, 3 tubs (3 water-closets, 3 basins).

The second floor, which is reached by a stairway leading from the men's waiting room, contains compartments for men only. Its capacity is as follows: Thirty-eight showers, 1 tub (3 water-closets, 2 urinals, 1 basin). The total bathing capacity of the building is therefore 103.

An advantage gained by this arrangement is the possibility of shutting off the second-floor section entirely at seasons when the patronage is light, especially in the winter, thereby reducing the cost of maintenance. No living quarters or laundry are provided.

It is estimated that each of these baths will require about \$21,000 per year for supplies, heating, lighting, and salaries of attendants. All three are expected to be in active operation before the close of 1904.

In addition to the baths mentioned above, plans have recently been prepared for structures at 538 and 540 East Eleventh street, West Sixtieth street and West End avenue, East Seventy-sixth street, and John

Jay park. These baths are to cost about \$100,000 each, exclusive of site, and are expected to be finished about December, 1904. A large bath is also planned for erection on property owned by the city at the foot of East Twenty-third street, which will provide accommodations for about 18,000 persons per day, and thus supply to a considerable extent the absence of the floating baths. This bath is to cost about \$230,000, and is expected to be completed early in 1905.

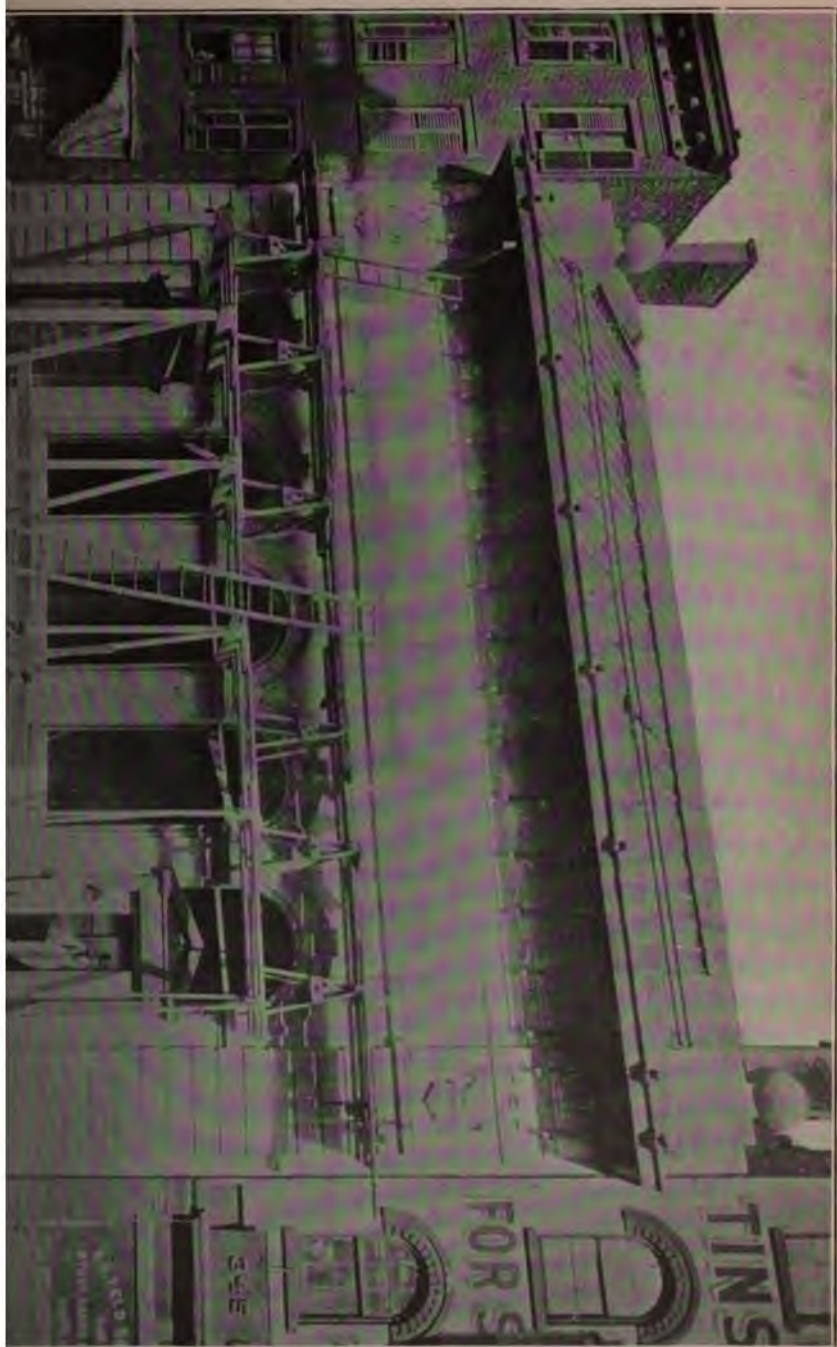
The house which is now under construction at 232 and 234 West Sixtieth street will be of a type somewhat different from any of the baths now in operation in the city, combining the advantages of a large plunge with those of the usual type, which includes showers only. This house, which is to be built on the standard lot of 50 by 100 feet, was designed by Werner and Windolph, who first made a thorough and exhaustive study of the subject in Germany and England. Mr. Harold Werner describes this type of public bath (Plates 155 to 157) in a recent number of *Architecture*, as follows:

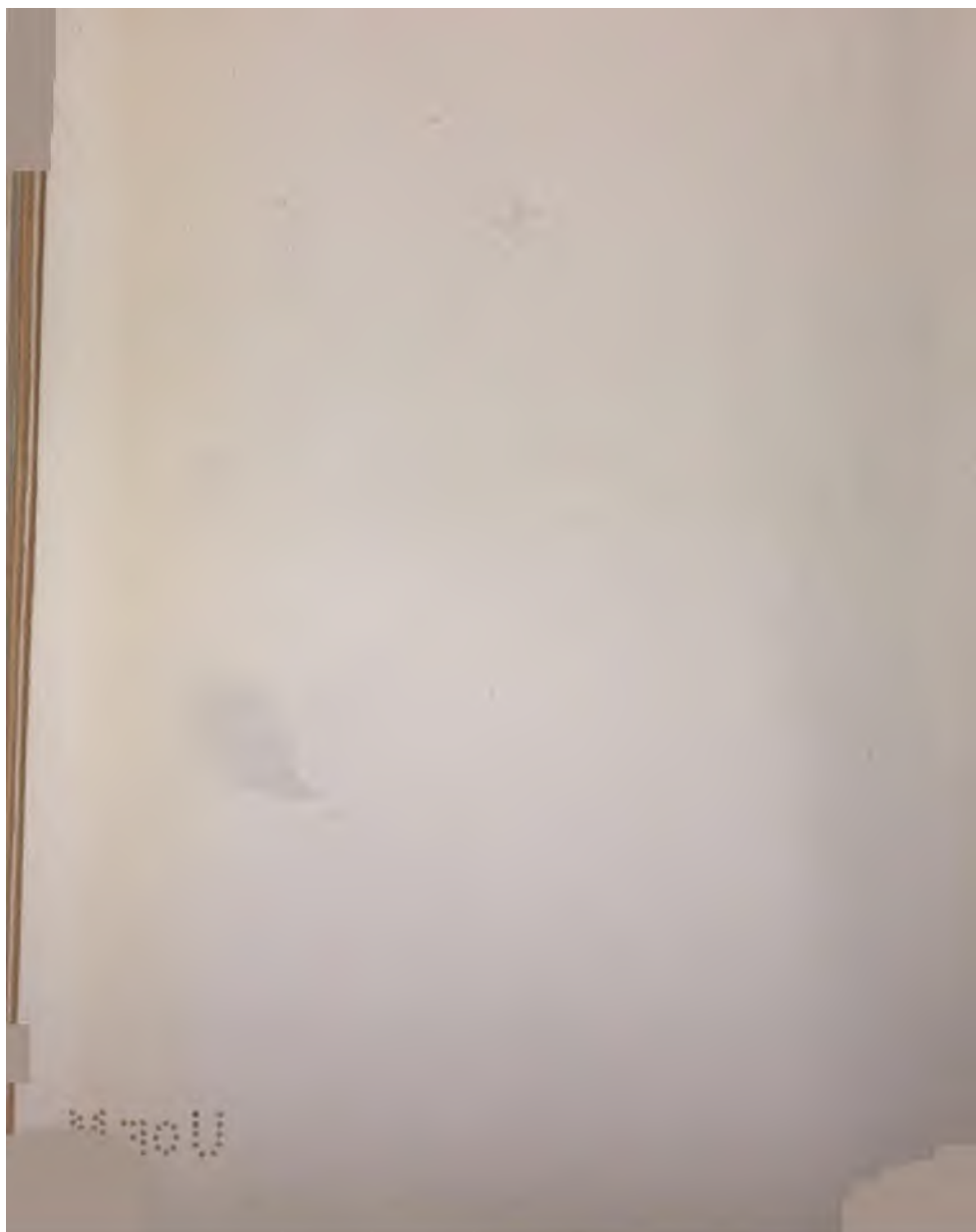
The building in design is expressive of its purpose and municipal in character. The exterior materials will be granite, limestone, brick, iron, and bronze, and the entire interior side walls are laid up in white impervious brick, which have been substituted for plaster and enamel brick which have heretofore not proved satisfactory. A patent waterproof flooring will be used throughout, and all molded work has been omitted as far as possible. There is no molded trim of any description in the interior; all the surfaces are rounded corners, floors rounded at all angles, giving as far as possible unobstructed easy wash-down surfaces. Slate, marble, and novus glass (impervious, opal white in color) are used for wainscot and lining.

General arrangement of the bathing halls shows low corridors. The corridors are 100 feet long, the length of the plot, facilitating supervision and simplifying the arrangement of the supply and waste lines. The plan illustrates this arrangement, which is different from the prevailing type.

Ease of communication and rapidity of handling the bathers are the prime considerations, and in order to do away with the crush at the entrance of the bath house a special exit has been provided, insuring a steady in-and-out flow and uninterrupted movement of the bathers at all times. The capacity of the bath house is 1,500,000 baths a year. Bath tubs have been eliminated, as they have proved insanitary and difficult to keep clean, and are also a source of jealousy and confusion in the bath house.

It was feared it would be impossible to arrange for a plunge bath in this type of bath house, owing to the narrowness of the site, but the difficulty has been overcome in an ingenious manner by the disposition of the plunge in the lower part of the building, taking the entire width of the plot, with the men's and women's shower baths arranged in the upper story. The dressing rooms for the plunge are on the level with the street, and the staircase on either side gives access to the plunge below, which is solidly lined on all sides with slabs of opal glass, giving a wonderfully clean and sanitary effect. The capacity of the plunge is 80,000 gallons of clear Croton water, with a distributed





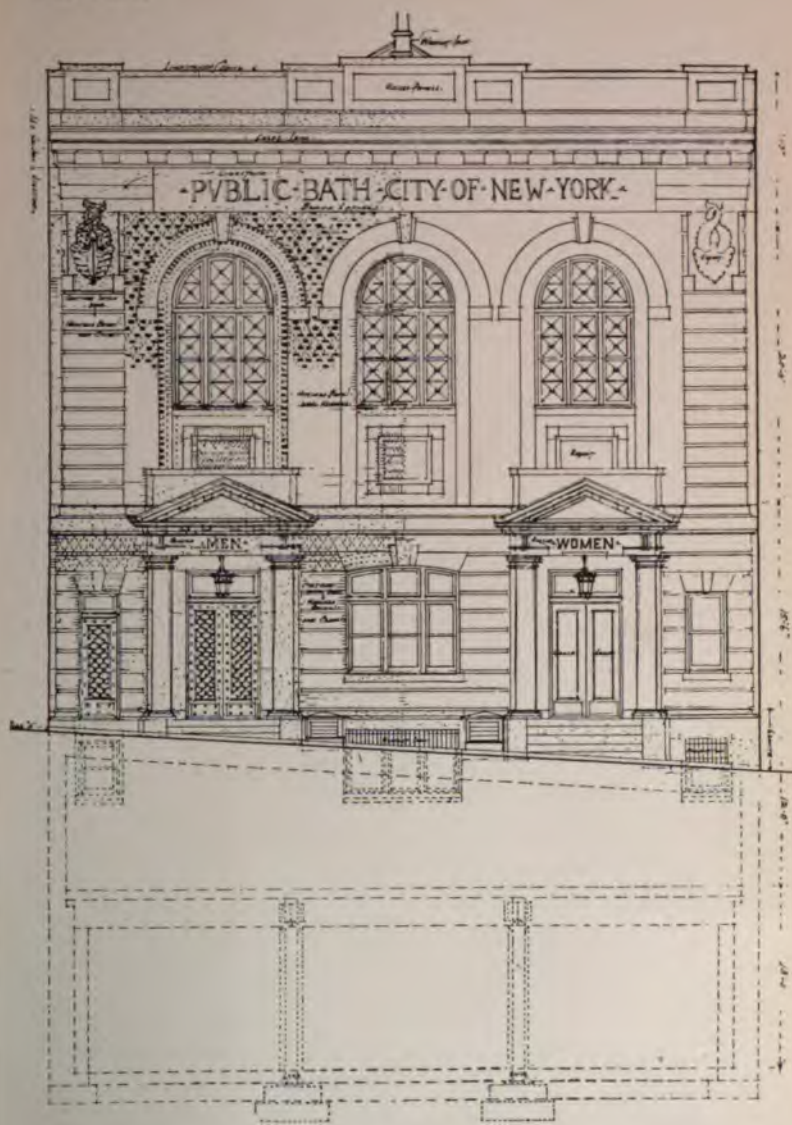
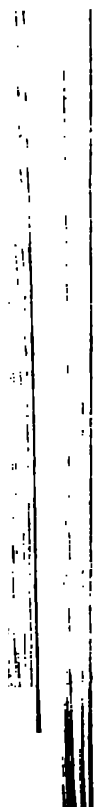


PLATE 155—WEST SIXTIETH STREET MUNICIPAL BATH, NEW YORK, NEW YORK





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source of supply constantly kept in circulation, also having a constant in-and-out flow approximating 20,000 gallons an hour, or a complete change of water three times a day. A superficial current of water insures a clean surface water. These improved devices have been resorted to to perfect its sanitation.

The water will be raised in temperature from the temperature of the street mains to 70° or 80° Fahrenheit, according to the weather, although if deemed necessary it may be admitted to the pool at the temperature at which it enters the building. This result will be accomplished by passing the water through a special form of heaters, through which the live and exhaust steam will pass. All the water entering the pool will be thoroughly filtered by a most complete filter plant, which will insure the water being absolutely pure and clear.

The cleansing room, which is to be used for all patrons who wish to use the plunge, will be equipped with 32 showers, divided up into rows or sections, each section being controlled by an independent supply and valve.

The hot-water supply for the showers will be entirely independent from the hot-water supply for the plunge, as the water used for this purpose will necessarily be of considerably higher temperature than the water for the plunge. This will be accomplished by a special arrangement of tanks.

The system to be employed for heating and ventilating the building will be a combination direct and indirect system. The direct radiators and coils are intended to be used only in case of emergency or when the building is unoccupied and it is necessary to have heat for the attendants and people who are cleaning the building.

The system of ventilating will be provided by special form of blowers set in designated parts of the building. The entire indirect system will be so arranged that in the summer time the system may be reversed—that is, forcing the cold outside air through in summer time and hot air through in winter time. In this manner a constant supply of fresh air will always be furnished the building independent of outside temperature.

In a large number of buildings where hot water and steam are used in great quantities the objection heretofore has been that there is always a vapor rising from the water and steam, which if allowed to remain in the building will cloud the atmosphere to such an extent that it is almost impossible to see. The objection will be entirely done away with by the introduction into the building of hot air at certain points in order to dissipate the rising vapor. The atmosphere is kept in a clean condition, no matter how much steam or vapor is admitted into the building.

All light and power necessary for the building will be operated from an isolated electric-light plant located in the engine room. In place of using automatic high-speed engines it has been decided to operate the dynamos with steam turbines, which occupy a great deal less space than the ordinary steam engine and cause very little trouble in their operation. All the heating fans, vent fans, and other small apparatus will be operated by direct-connected electric motors which will make the entire system most compact.

The electric lighting in the building will be most complete. There will be an electric light placed over each stall for the shower baths in the men's and women's baths, giving ample light for the occupants of

the same, and the ceiling of the plunge room will be illuminated by clusters of electric lights which will be placed on the trusses. All the lights in the building will be so inclosed as to obviate the danger of short circuits in case the water should come in contact with any of the fixtures. The lighting will all be controlled from a central point, and arranged in such a manner that only the attendants can operate the switches.

The flooring and runway to the plunge is kept continually warm by the use of heating chambers. The side walls, flooring, and runways to the plunge can be thoroughly and instantly washed out, in no way wetting or interfering with the dressing rooms above. Adjacent to this main plunge is the preliminary cleansing room, where every bather has to receive a satisfactory cleansing shower.

Provisions have been made in the upper part of the building for 62 showers for the men and 18 for the women. Some tubs and a hair-drying room will also be provided for the convenience of the women. The moving volume of water, as proposed, with a distributed source of supply, makes this form of bath practically perfect from a sanitary standpoint, and it has received the indorsement of the board of health and the leading experts on the subject in this country. The bather has the option of the showers or the plunge bath; the latter will undoubtedly become the favorite form of bathing, as it gives beneficial exercise, creates a desire for personal cleanliness, and stimulates friendly competition. The bath has been planned so that five turns give a standard distance of 100 yards. In London and throughout England these competitions in the public bath houses are already in high favor. This bath, in equipment and detail, will be the most complete of its kind in the country.

A new public bath, the gift of Mrs. Elizabeth Milbank Anderson, is also in course of erection by the New York Association for Improving the Condition of the Poor, at 325-327 East Thirty-eighth street, on a lot 50 by 100 feet in size. The plans for this bath follow closely those submitted by the association to the city authorities, with the addition of living quarters for the superintendent.

A description of the public baths in the borough of Brooklyn has already been given.

PHILADELPHIA, PENNSYLVANIA.

The first attempt made by the municipal authorities of Philadelphia to provide public bathing accommodations for the city occurred in 1870, when a number of floating baths were placed at convenient points along the river front. These baths were ordinary wooden structures, with protected bottoms to insure the safety of bathers. They were found to be very unsatisfactory, oftentimes being swamped by the wash from passing steamers in the river. In 1890 they were definitely abandoned and their places supplied with permanent indoor baths, of which 5 were owned by the city at that time. These establishments proving quite popular with the bathing public, the number was gradually increased until there are now 15 baths of this

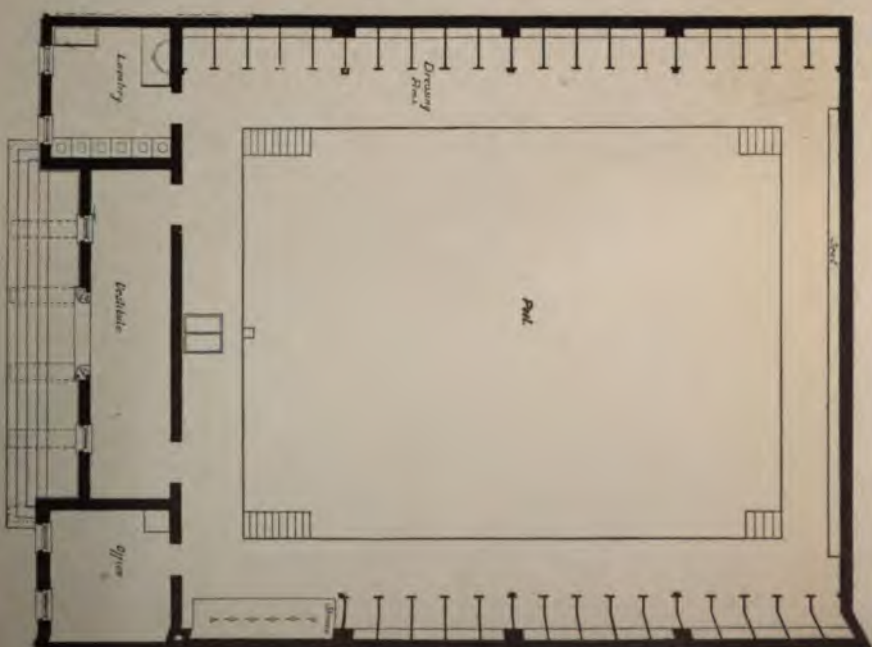


PLATE 158—ELEVENTH STREET MUNICIPAL BATH, PHILADELPHIA, PENNSYLVANIA



character in operation in different parts of the city, while another is under course of construction and will be opened in the near future. The buildings differ considerably as to cost and in the materials of which they are constructed. Some are built of wood and cost only about \$1,000, while others are of brick and stone, the cost ranging from \$10,000 to \$14,000. Some are open at the top, others are half closed, while still others are entirely inclosed, so as to prevent any view being had from the outside. Each house contains an average of 75 dressing rooms, and a pool for swimming purposes measuring about 50 by 100 feet, but varying somewhat in size, according to the ground upon which the bath is located (Plate 158). Showers were formerly found in several of the houses, but were regarded as superfluous, and their use has been discontinued. No hot water is provided at any of the baths, they being open only during the summer months, when the temperature of the water is adaptable to bathing purposes without fear of diverse physical results. Each bath is in charge of a superintendent at an annual salary of \$600, whose duty it is to look after the safety of bathers, care for the property, and empty and thoroughly cleanse the pool twice a week. One afternoon and evening of each week are reserved for women and girls, at which time the superintendent's wife or some other competent female attendant must be present to look after the wants of the bathers and to see that the rules are observed.

No income whatever is derived from these baths, the entire cost of maintenance being met by appropriations from the city. The season of 1902 lasted from June 15 to September 20, during which time the total attendance at the 14 baths in operation amounted to 4,453,108 persons, of whom 23,650 were women, 86,414 girls, 945,806 men, and 1,397,238 boys. The total expenditures for the year were \$11,000, making a cost to the city of only about one-fourth of a cent for each bath given.

The baths are open daily from the 1st of June until the end of September from 6 a. m. to 9 p. m. week days, and Sunday from 6 a. m. to 9 p. m.

PORTLAND, MAINE.

A free municipal bath is in operation in this city in the basement of a large public building used as an auditorium and drill hall for the local military organization. This bath was first opened to the public on October 19, 1901, and represents an expenditure of \$2,357. It is equipped with 11 showers and an equal number of dressing apartments, and is open all the year round. Separate hours for bathing are assigned to males and females. The number of persons using the baths in 1902 was estimated at 30,000, of whom about 2,000 were women and girls. The cost of maintenance and operation for that year was about \$1,200.

The presence of numerous summer resorts in the vicinity of Portland renders the need of public bathing facilities for the city much less pronounced than would otherwise be the case, so that the great success attained by these indoor baths has been a source of surprise even to those interested in their establishment.

PROVIDENCE, RHODE ISLAND.

Providence has two floating baths in the Seekonk River, which were constructed in 1878 and which, though now badly in need of repairs, are quite popular with the bathing public during the summer season. These houses are plain wooden structures, each equipped with 10 dressing rooms and a swimming tank 25 by 75 feet in size. One house is used exclusively by males and the other by females. No charge is made for bathing privileges at either. The attendance at the two baths during the summer of 1902 was 36,804, divided about equally between the two sexes. The cost of maintenance for that period was \$1,012.32.

At the time of their erection these buildings were valued at \$5,000 each, but owing to decay and the failure to keep them in a proper state of repair their combined value is now only about \$1,600, and it is only a question of time when their use will have to be discontinued.

ROCHESTER, NEW YORK.

The history of the free-bath movement in Rochester dates from the spring of 1895, when an act was passed by the State legislature requiring all cities of 50,000 or more inhabitants to "establish and maintain such number of free public baths as the local board of health may determine to be necessary." Shortly after the enactment of this law the Rochester board of health passed a resolution advocating the establishment of two free public baths in the city. No further official action seems to have been taken, however, until January 18, 1898, when the common council authorized the appointment of a special committee to investigate the subject of public baths. In the meantime the matter had continued to be agitated in the public press and by various individuals of prominence in public affairs, who strongly urged upon the municipal authorities a compliance with the terms of the law. On June 17, 1898, the local board of health reconsidered the action declaring the necessity for two public baths and resolved that "under existing conditions there is a necessity for one public bath in the city of Rochester." Being authorized by the common council to proceed with the selection of a site, the bath committee purchased the property on South avenue owned by the Home of Industry for the sum of \$10,000, and converted the old brick dwelling house into a waiting room and living apartments for the attendants, with an annex con-

structed to contain the baths. The cost of this work was about \$5,000, which, with the addition of a few slight improvements since made, brings the total cost of the bath up to about \$15,500. It was first opened to the public July 27, 1899, and immediately became a great popular success.

The building is 25 by 61 feet; the front portion 25 by 32 feet, being the old building, is two stories in height, and in the second story is contained the living rooms of the attendants. Two rooms have also been fitted up in the attic for sleeping rooms. The first floor of the old building is occupied by a waiting room 18 by 19 feet, and by a wash room 8 by 11 feet, containing a wash tray and drying apartment heated by steam. There are also two water-closets in this portion of the building.

The new portion, 25 by 39 feet, is occupied entirely by shower baths. There are in this portion 13 rooms, 4 feet 6 inches by 8 feet, equipped with shower baths, in addition to which there is a larger double shower, 8 by 14 feet, for boys. This latter room has been divided into two rooms, 8 by 7 feet, making altogether 15 separate rooms.

This building stands on a lot having a frontage on South avenue of 52.5 feet and a depth of about 200 feet. There is also quite a large plat of land in the rear of this lot, making the area altogether about a half acre.

The baths are open for fourteen hours every day in the week, Sunday excepted, during the entire year. Tuesday and Friday afternoons are set apart for women and girls. No charge whatever is made for bathing privileges, soap and towel being furnished free. Bathers are admitted to the showers in the order in which they enter the waiting room, twenty minutes time being allowed each.

The operating expenses during 1902 were \$3,000 and the number of bathers was 53,000, about 16 per cent of whom were females.

ST. PAUL, MINNESOTA.

St. Paul has a free public bath which is beautifully situated on an island in the Mississippi River and which accommodates many thousands of bathers during the sultry days of summer. This establishment, combining a municipal bath house, restaurant, and playground, is the gift to the city of Dr. Justus Ohage, whose great interest in the subject of public sanitation induced him to relinquish a lucrative practice in order to direct the work of the city health department. Being impressed with the need of public bath accommodations for the poorer classes of the people, and believing that this matter properly came within the province of his department, he determined in 1899 to establish public baths and playgrounds within the reach of all. The city having at that time no funds available for such a purpose Doctor Ohage resolved to supply the means necessary to the accomplishment

of his object from his own private purse, and began looking about for a suitable location. After a careful investigation a strip of waste land lying in the river, between Wabasha and the high bridge and known as Harriet Island, was selected as a suitable place for the undertaking. The owners of this property, which measures about 70 acres in extent, were communicated with and in most cases they readily donated their interests in the land to the health department for the purpose of establishing public baths. The rights of others were purchased, and all title and interest was vested by deed in the commissioner of health. A gang of workmen was set to work clearing away the growth of underbrush, willows and other trees which covered the island, sweepings from the city streets were deposited to make soil for the grass, suitable accommodations for bathers were provided, and in 1900 the park was thrown open to the use of the public. It was the object of the health commissioner to have this work done and paid for by private subscriptions, without any expense to the city whatever. This plan was later successfully carried out. With the assistance of certain public-spirited citizens, supplemented largely by the contributions of Doctor Ohage, the property was freed from all incumbrance and formally transferred to the city on August 1, 1901.

The total cost of the island and buildings at the time of their transfer to the city was about \$12,000. Since then the municipality has expended about \$20,000 in improvements, which makes this one of the finest and most attractive parks in the city.

The bath accommodations consist of two neat and commodious buildings, one for males and the other for females, with separate bathing pools in the river for each sex. A third pool, designed for family use, is located between these two. Four life guards are stationed in the water, while expert divers and swimmers, as well as commissioned police officers, constantly patrol their respective districts fully prepared to render assistance in case of accident. The following notice is conspicuously posted:

Notice to the public.

These baths and grounds and everything pertaining thereto belong to the citizens of St. Paul - to you.

You are part owner of them and are therefore interested in their success and reputation. Interest yourself sufficiently in them by your own good conduct, and your treatment of others that they may be a source of healthy and joyful recreation for our fellow-citizens, as intended. If you bring your own soap, towel, and bath suit, no charge will be made, and you have free access to the baths and dressing rooms.

If you choose not to trouble yourself with this, you can get a bath suit, towel, and soap for 2 cents, or private cabinet with locker for one-half hour, bath suit, two towels, and one piece of soap for 5 cents.

On application you get instruction in swimming free of charge.

At the restaurant you can get light lunch, coffee, tea, milk, or beef tea, rolls or sandwiches at a low figure, enough to cover the cost only.

Payments at the bath or at the restaurant are made in checks only, which you can get of the cashiers, in two and five cent denominations. No attendant is allowed to receive money. Do not trouble the cashier with large change.

While more than ordinary precautions are taken by the attendants toward the safety of the bathers and their property, the board of health, or the city of St. Paul, assumes no responsibility in cases of accident or theft.

The baths and restaurant are under the direct control of the board of health, which vouches for their cleanliness and sanitary condition. The baths are open during the season every day, Sundays included, from 6 a. m. to 11 p. m.

J. OHAGE, M. D.,
Commissioner of Health.

A recent addition to the accommodations at this place is a free summer kitchen, where picnic parties and families may do their own cooking. The kitchen is provided with stoves, pans, pots, and kettles, firewood is furnished free, while an artesian well near by supplies an abundance of excellent water.

In connection with the baths there is a free out-of-door gymnasium, equipped with the best apparatus and in charge of the physical instructor of the Y. M. C. A. A nursery, where the younger children are carefully looked after, is another popular feature. The sale of intoxicating liquors, cigarettes, and chewing gum is prohibited on the island, while swearing, boisterous language, and improper conduct are absolutely forbidden. The entire absence of all disorder and vulgarity at this resort stamps it as one of the best regulated and most orderly parts of the city. More than forty neatly uniformed attendants are employed in various capacities at the park.

Of the bathers about 85 per cent bring their own towels and suits and pay nothing. The total attendance at the baths in 1902 was 204,081, divided between 158,722 males and 45,359 females.

SPRINGFIELD, MASSACHUSETTS.

The city of Springfield was presented some years ago with a floating bath, which is moored in the Connecticut River at the foot of Bridge street, and which is quite popular during the summer months. It is a plain wooden structure resting on two great pontoons, and containing 36 dressing rooms and a swimming tank 20 by 55 feet, with a depth varying from 3 to 5 feet. It is patronized largely by children when the water is warm enough for bathing in the river. Although primarily intended for the use of boys, the bath is open on one afternoon of each week to women and girls, at which time a matron is in charge. Soap and towels may be had on payment of a fee of 5 cents. Hardly

and revenue is received in this way, however, as nearly all bathers prefer to provide themselves with these articles. The expense of maintenance is about \$1,000 per year, of which \$450 is for the salary of the keeper. In 1902 the bath was used by about 30,000 persons, of whom about 650 were women and girls.

In addition to this floating bath, there are two schools in the city equipped with showers and bath tubs for the use of children. These baths are in charge of matrons, who attend to the children at such times as will least interfere with their recitations. Bathing is not made compulsory, but the privilege is eagerly sought by the pupils, especially those who have no bath tubs in their homes. Women are admitted on Saturday, no school being in session on that day. During the summer vacation the baths are kept open on three days of the week for the use of women and children. The expense of maintaining these school baths is about \$2 per day each, \$1.50 per day being the salary of the matron.

SYRACUSE, NEW YORK.

The municipal bath house on North Leavenworth avenue, in this city, furnished free baths during the year ending December 31, 1902, to 67,724 persons, about 95 per cent of whom were males. The system used is a combination of the shower, plunge, and tub bath, which permits a considerable number of persons to bathe at one time. The bath was opened in 1900, and consists of a handsome frame building, in which are found 16 showers, 20 tubs, and a wooden plunge measuring 36 feet in width by 96 feet in length. The number of dressing rooms is 37. Living apartments for the superintendent are also found in the building. The baths are opened throughout the year, different hours being assigned to males and females. Private sulphur baths may be had on payment of 25 cents. The revenue from this source in 1902 was \$485.75, there being 1,943 baths of this kind given. The total operating expenses for the year were \$3,343.94. The cost of the building and equipment, with land, was \$12,000.

TAUNTON, MASSACHUSETTS.

As a result of popular demand for bath accommodations, the municipal authorities of Taunton, in 1895, established a free public bath of the floating type on a large lake situated on the outskirts of the city. This bath is very simple in design, consisting of a central tank about 4 feet in depth, surrounded by a platform, on which are located a number of small individual dressing rooms for the use of bathers. The original cost of construction was about \$600. The expense of maintenance, including necessary repairs, is about \$400 per year. No income whatever is received from this bath, its use being absolutely free to all persons. The average attendance is, roughly speak-

ing, about 5,000 per season. The bath is conducted under the supervision of the local board of health.

The house is open to the public from May 30 to September 15, from 8 a. m. to 8 p. m., on week days and on Sunday. Men and boys have free use of the baths between these hours, but no boys under the age of 15 years can use the baths after 5 p. m., and Wednesday and Saturday from 1 to 5 p. m. are reserved exclusively for women and girls. A janitor is in attendance at all hours, and a matron during the women's hours.

TROY, NEW YORK.

A well-equipped and thoroughly modern public bath was opened on First street in this city in 1901. The building is a handsome brick structure, covering a lot 50 by 120 feet, and costing, with land, \$14,000. It has 24 shower baths, 16 for men and 8 for women, in addition to which there are 2 bath tubs for those who do not care to go under the showers. No swimming tank is provided. The number of dressing rooms is 24. Living apartments for the superintendent, as well as separate waiting rooms for the two sexes, are also found in the building. A public laundry forms part of the equipment. The baths are open every month in the year, an abundance of hot water being furnished at all times. No charge whatever is made for bathing privileges, soap and towels being supplied without cost to the bather.

The total number of persons making use of this bath in 1902 was 74,092, of whom 44,205 were males and 29,887 females. The operating expenses for the year amounted to about \$1,800.

UTICA, NEW YORK.

A free public bath was built by the city of Utica in 1893, at a cost of \$6,077.45. It is located on a small stream within the city limits, where, by means of a dam, sufficient water is obtained for the accommodation of a considerable number of bathers. The building contains about 100 dressing compartments for the use of bathers, but is not equipped with shower baths or tubs. It is open from May 1 to October 1, and is entirely free to all persons. One attendant, at a salary of \$2 per day, is employed. During the month of July, 1902, a total of 8,094 persons availed themselves of the privileges of this bath. Of these 7,074 were males and 1,020 females. The cost of maintenance for 1902 was \$403.33.

WASHINGTON, DISTRICT OF COLUMBIA.

The history of the free-bath movement in Washington dates from 1889, when a number of gentlemen interested in the subject, prominent among whom was Mr. W. X. Stevens, the present superintendent of the bathing beach, formed themselves into an association with the object of securing for the city the benefits of a public-bath system.

This association applied to the District Commissioners for permission to construct a bathing beach on the Potomac River adjacent to the Washington Monument grounds, and requested that adequate police surveillance be provided. The object of this provision was to "furnish a place where the youth of the District could resort for aquatic diversion under supervision that would reduce to a minimum the hazard from accident incident to river bathing, and at the same time eliminate the rudeness which boys will exhibit toward each other when assembled at such places without authoritative surveillance and restraint."

Finding that no power was vested in the municipal authorities or in any of the Executive officers of the Federal Government to grant the use of any portion of the tidal reservoir for the purpose named, the association resorted to Congress and secured the enactment of the following law, which was approved on September 26, 1890:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Commissioners of the District of Columbia are hereby authorized and permitted to construct a beach and dressing houses upon the east shore of the tidal reservoir against the Washington Monument grounds, and to maintain the same for the purpose of free public bathing, under such regulations as they shall deem to be for the public welfare; and the Secretary of War is requested to permit such use of the public domain as may be required to accomplish the objects above set forth.

SEC. 2. That the sum of three thousand dollars is hereby appropriated from the revenues of the District of Columbia, to be immediately available, for the purposes of this act.

Pursuant to this law a portion of the tidal reservoir beach, containing about 3 acres and lying immediately west of the Monument, was set aside, with the approval of the Secretary of War, for use as a public-bath station. Owing to the great mass of alluvium deposited at this spot by the action of the river current it was necessary to do considerable dredging and filling in with sand before a bottom suitable for bathing purposes could be secured. This being at length accomplished, a number of frame dressing booths were erected, and the beach was thrown open to the public in the summer of 1891. No further appropriation was made for the beach until 1894, when \$1,000 was provided by the District appropriation act approved August 7 of that year. During the intervening period the running expenses of the beach were met by means of fees from bathers for the use of bath suits and by other charges for special advantages. Since 1894 regular appropriations have been made each year for the maintenance of the beach.

In 1896, with the approval of the Secretary of War, work was commenced under an appropriation of \$4,000 to be used "toward adapting the inner basin on the Potomac Flats for a public bathing pool." The

plan contemplated the grading of the surrounding banks "to leave a sand-covered beach about 25 feet wide a few inches above the level of the water nearly all around the pool, and from the outer edge of the sand to grade the bank at a general incline of about 30°, to be maintained in place by growing trees and grass roots." At the mouth of the basin it was proposed "to introduce a flume about 50 feet long by 10 feet wide and high enough to extend from the general road level to the bottom of the outlet, and to place a gate at the inner end of the flume to control the rise and fall of tides." A bridge over the flume and a public roadway around the pool were also contemplated in the plans.

Regarding the interruption of work on this improvement, the report of the advisory committee on the bathing beach for 1901 states that—

After considerable progress had been made with this work, at an expenditure of \$2,194.81, it was discovered that it was not practicable to throw the sand upon the bottom from the scows in which it was delivered so as to make a surface approximately uniform, nor to grade it to such a surface after it had been deposited. In consequence of this embarrassment the Commissioners decided that it was not advisable to proceed with the work without a more thorough study of the plan and details of execution. The work was thereupon suspended.

By the terms of the District appropriation law of June 30, 1898, the unexpended balance of that appropriation was made applicable to the improvement and repair of the old beach, and no further work was done on the inner basin until 1903, when contemplated improvements along the shores of the tidal reservoir necessitated the removal of the bath houses to some other point. Attention was then once more directed toward the inner basin. When the District appropriation bill was taken up in Congress there developed a marked interest in the bathing beach among the legislators. They were told of the great popularity of the beach at all times and of the struggle that had been necessary to keep it in operation with the limited amount of money set aside for its maintenance. As a result of these representations Congress not only made a liberal appropriation for improving the inner basin and the erection of bath houses there, but also provided the sum of \$5,000 for the erection, maintenance, and repair of two floating baths, to be located at points designated by the Commissioners and the War Department officials. The contract for these baths was immediately let and they were placed in operation at the beginning of the bathing season. They were moored in the tidal basin a short distance from the northern shore and connected therewith by a gangway guarded on either side by rails. The dressing rooms were located on the strip of land separating the larger tidal reservoir from the inner basin, thus permitting the entire space in the floating houses to be devoted to bathing accommodations. The arrangement is very convenient for the bather. Emerging from the dressing room he can, by

turning to the south, walk out the gangway to the floating bath or, turning to the north, make his way out upon the beach and into the waters of the inner basin. The cost of the two floating baths was \$2,118. The first of these is intended for the use of white bathers, and consists of a frame structure 38 feet wide by 70 feet long, with an outer platform 6 feet wide extending across the end nearest the gangway. Around the inside of the building runs a platform 4 feet in width, which incloses a swimming pool 30 by 60 feet, divided into two parts measuring 18 by 30 and 30 by 42 feet, respectively. The water in the larger tank is 4 feet in depth, while in the other it is only 2 feet 6 inches. These tanks are constructed of strong wooden slats so placed as to permit free play of the river currents through them, thus insuring at all times a fresh supply of water. The structure is left open at the top in order to secure ventilation and facilitate the drying of the walls and floor. The bath for colored persons is similar in design to the other, but measures only 30 feet in width by 54 feet in length.

No charge is made at the beach for those bringing their own bathing apparel. A fee of 10 cents for children and 15 cents for adults is charged for the rent of suits. Separate baths and dressing rooms are provided for males and females. Swimming instruction is provided by competent teachers, while a number of life guards are constantly on hand in case of accident. The receipts for the use of bathing suits and private dressing rooms in 1903 were \$387.85, while \$150 was realized from the rent of refreshment-stand privileges. The total number of bathers during the season was 33,496, the highest record for any one day being 1,394. In his annual report to the District Commissioners, Superintendent Stevens states that—

The very low number of patrons this season is due to a number of obstacles: (1) The disturbed condition of the approaches due to building the new speedway, which runs from the foot of Seventeenth street directly beside the swimming lake. (2) The unusually cool and rainy weather, which has rendered outdoor bathing uncomfortable. (3) Prejudice against the present inclosed lake, on the supposition that water which is not permitted to run freely is stagnant in an unhealthy sense. This has been proved to be untrue by tests made by the board of health. Every day this season the water of the inner basin has been cleaner and healthier for bathing than the open river water outside. This is the verdict of thousands who had the opportunity to try both.

At first the floating baths in the open water were favored by many because of the statements against the inner basin made by some of the papers, but the evidence of their own eyes and actual trial proved the clear water, the sandy bottom, and the shady shores of the basin to be so far preferable that near the end of the season not one in a hundred went to the floating baths at all. The grass and weeds growing in the basin are seriously objectionable, and we hope to be able to root them out and by covering the whole bottom with sand to prevent their further growth before another bathing season.

Now, in spite of all these obstacles, the beach is so popular that on the very few hot days which there have been this season the dressing rooms were crowded and wholly inadequate to the demand.

At the close of each bathing season it is customary to conduct, under the supervision of a committee appointed for the purpose, a series of swimming and diving contests which are open, with certain restrictions, to all patrons of the beach. The prizes consist of gold and silver medals, purchased with money donated by prominent business men of the city supplemented by entrance fees and by portions of the bathing-beach fund. These contests are viewed annually by hundreds of interested spectators, and since their institution have added greatly to the popularity of the beach.

WILMINGTON, DELAWARE.

The city of Wilmington maintains a public bath, the income from which for the year ending December 31, 1901, was \$204, and the cost of maintenance \$325.

WORCESTER, MASSACHUSETTS.

The public bath accommodations of Worcester consist of two floating houses, one for men and another for women, located on Lake Quinsigamond, near the eastern limits of the city. The men's bath was opened in 1897, and comprises a frame structure equipped with 55 dressing rooms and a plunge bath 8 feet by 19 feet 8 inches, with a depth of $3\frac{1}{2}$ feet. The house for women, opened in 1898, is similar in design, and contains 47 dressing rooms and a tank $8\frac{1}{2}$ by 25 feet and 4 feet deep. The cost of each bath was about \$3,500, and the running expenses of each average about \$300 per year. No charge whatever is made for their use. At the men's house bathing tights and towels may be hired of the keeper for a nominal sum--5 cents for tights and 3 cents for a towel. The matron in charge of the women's bath furnishes suits at 10 cents and towels at 3 cents each to persons without these articles. Most bathers, however, prefer to bring their own suits and towels. Swimming instruction is provided at each place. During the summer of 1902 the baths were patronized by 18,268 males and 11,495 females.

YONKERS, NEW YORK.

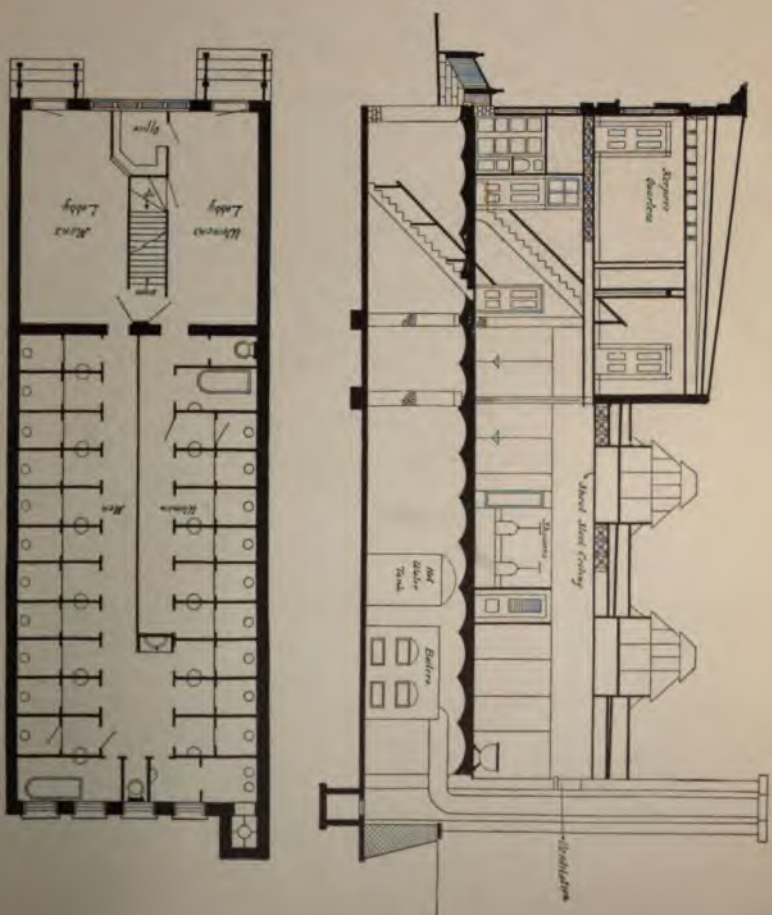
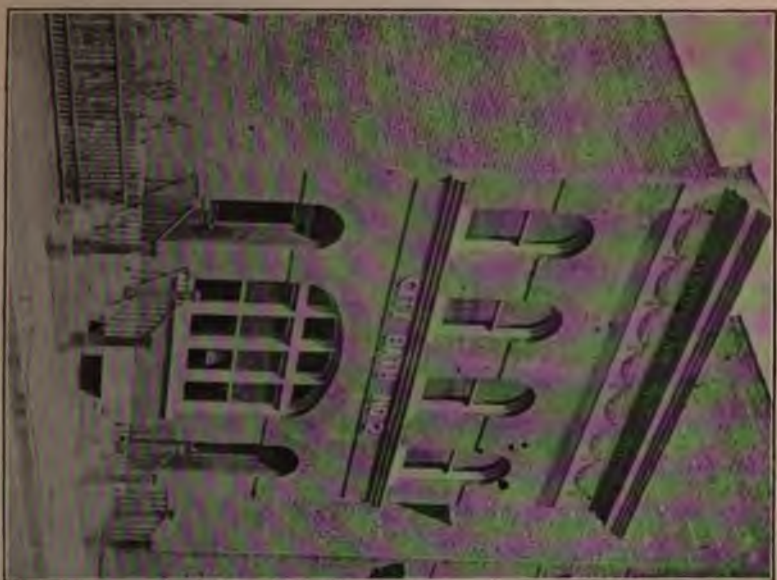
Prior to the establishment of the present public bath system in Yonkers it was proposed to build a floating bath in the Hudson River at a point convenient to those districts of the city in which home bathing facilities were most lacking. Plans for such a bath were prepared and bids received for its construction which determined its cost at about \$10,000, including the necessary dredging and other work

incident to the preparation of a suitable location. A site was purchased by the city and preparations for an early commencement of work were about completed when the committee having the matter in charge concluded that an indoor bath, open all the year round, would be a better use of the public money, and the plan for a floating bath was definitely abandoned. The increasing pollution of the river with sewage and the great expense necessary to the construction of a bath of this character, together with the fact that it could be used for only a few months each year, were the principal reasons for the committee's change of plans.

At the present time the city has two indoor baths in successful operation, while plans are under way for the erection of a third in the near future. The two baths now in existence were designed by the commissioner of public works, Mr. S. L. Cooper, who has kindly supplied the facts for the following description:

Bath No. 1 is located on the northeast corner of Vark and Jefferson streets, on a lot measuring 25 by 100 feet. The building itself is 25 by 63 feet, and is constructed of yellow pressed brick, with trimmings of white Tuckahoe marble. The front portion of the structure is two stories in height, with a concreted cellar in which is located the apparatus for heating the building in winter and supplying hot water to the baths. The first floor contains waiting rooms for men and women, each having a separate entrance, and an office for the person in charge. On the second floor are found living apartments for the keeper and his wife, who do all the work in connection with the operation of the bath except the large repairs and laundry work.

The rear portion of the building is only one story high and is equipped with 18 showers and 1 tub bath for men and 6 showers and 1 tub bath for women, with a toilet for each sex. The floor is of concrete, laid over brick arches between steel beams. The ceiling is plain sheet steel, and all the inside work, except the floor, is painted with white enamel. Each bath compartment, which measures 3 feet 4 inches by 7 feet 6 inches, is divided by a sheet-iron door into two spaces, one for bathing and the other for dressing. The bathing space is 3 feet 4 inches by 4 feet, and is provided with a combination hot and cold water spray and a soap dish riveted to the partition. Each dressing room contains a cast-iron seat and a number of hooks for clothing. The bath-tub compartments, of which there is one for each sex, are somewhat larger, being 4 feet 6 inches by 7 feet 6 inches, and contain a white-enameled iron tub, supplied with hot and cold water. Each bathing and dressing room is covered overhead with wire netting, while light is admitted through a large skylight in the center of the roof. The partitions inclosing the bath compartments are made of sheet steel, stiffened at the top and all angles with light angle irons. The lot on which the building is located was purchased



feet 1 inch, divided by a partition into two portions, one for bathing and the other for dressing. These compartments are of corrugated iron below, painted with white enamel, and wire netting above to secure light and ventilation. Very recently there have been constructed 18 additional baths at a cost of about \$2,800, which are superior in some respects to the older ones. These are built of green slate, with cement floors, and are both sanitary and substantial. The aisles are floored with mosaic tile, and are lighted by electricity. The supply of hot water, as well as the temperature, is regulated by an attendant in the aisle, but the bather has control of an independent supply pipe, from which he may obtain as much cold water as he desires. By this arrangement economy of fuel is secured and the time allowed for a bath brought within proper limits. The charge for bathing privileges, including use of towel and soap, is 5 cents.

During the fiscal year ending August, 1903, baths were taken by 43,809 persons, all of whom were males. Formerly a certain number of the bath compartments were reserved for the use of women, but the small attendance during recent years has resulted in a final discontinuance of this plan.

PEOPLE'S BATH.

This bath, opened in 1891 by the New York Association for Improving the Condition of the Poor, is described in the report of the committee on public baths and public comfort stations, 1897, as follows:

The People's Bath House stands in Center Market place, near Broome street, in the midst of a large tenement-house district, and adjacent to an industrial center where a mechanical and laboring population of a cosmopolitan character is constantly employed. It is substantially constructed of brick and iron, two stories in height, and presents an attractive appearance. The walls are of white enamel brick, strong iron beams support the floors, and the roof and bathrooms are of iron. Brick, cement, and slate have been much used in the interior, and light-colored bricks compose a façade as striking as it is ornamental. The building is set off by many cheerful windows and an expansive arch spans the doorway. * * * The engine is especially strong and durable, and a powerful boiler heats the water for the whole building. Croton water is used and also an artesian well, sunk within the building, which insures a full supply, never failing and pure. Improved laundry machinery and ventilating apparatus are also placed in the basement, and all towels in use are washed upon the premises. Every inch of space is economized. The whole structure is a model in its way and a compact embodiment of architectural and mechanical skill. Solidity is its great characteristic, and a glance at the building will convince anyone that it is certainly well adapted for perennial baths. A large skylight gives light to the bathrooms above, there is gas for those below, and the most improved methods of sanitary engineering have been adopted and skillfully executed. The fine appearance of the prior is matched by the comfort and attractiveness manifested

within. All idea of patronage is avoided, and the bath house as it stands is both an ornament and a pride.

A bather occupies his apartment for twenty minutes. This is ample time for a comfortable bath. He receives a towel and a cake of soap, and the fee for the bath is 5 cents. A mother with little children counts as one, and so much is this privilege appreciated that the tubs are in constant use the year round.

The management is excellent. Cleanliness and economy are strictly observed, and an atmosphere of comfort pervades the establishment. The floors and walls are as clean and bright as the kitchen of an American housewife, and the brass work shines like her tins. A competent matron cares for the women. A man of experience looks after the men. The police authorities have kindly detailed an officer as a regular attendant, and perfect order is maintained.

The bath accommodations consist of 16 sprays on the first floor—10 for men and 6 for women—besides 3 bath tubs for elderly women, and children. There are also 7 spray baths for men in the basement, similar in construction to those on the main floor. The second story is occupied as living quarters by the superintendent. Separate waiting rooms, reached through separate entrances from the street, are provided for males and females. The baths are open to the public every day in the year, the following schedule of hours being observed:

June 1 to September 30.—6 a. m. to 9 p. m. Sunday, 6 a. m. to 9.30 a. m.

October 1 to October 31.—8 a. m. to 8 p. m. Sunday, 7 a. m. to 9.30 a. m.

November 1 to March 31.—9 a. m. to 8 p. m. Sunday, 7 a. m. to 9.30 a. m.

April 1 to May 31.—8 a. m. to 8 p. m. Sunday, 7 a. m. to 9.30 a. m.

All holidays.—7 a. m. to 11 a. m.

The building is located upon land leased by the association for a small yearly rental, and with the bath equipment cost a little more than \$27,000. During the twelve months ending October 1, 1902, there was a total of nearly 119,000 baths given, of which about 5 per cent were free. The cost of maintenance for this period was \$5,968.41, and the income about \$330 less. During the first eleven years of its operation considerably over a million baths were given at this bath house.

ALLEGHENY, PENNSYLVANIA.

PHIPPS GYMNASIUM AND BATH HOUSE.

The Phipps Gymnasium and Bath House, located at the corner of Rebecca and School streets, Allegheny, is the gift of Mr. Henry Phipps to the residents of the ward in which he spent his boyhood days. It was formally opened to the public on May 13, 1903, its cost, including land, being \$87,000. The building is of brick, with stone trimmings, and its equipment consists of 20 shower baths and 8 tubs,

all of the most approved pattern and supplied with both hot and cold water. Each bath compartment has a dressing space annexed sufficiently ample for the needs of the bather. The baths are open throughout the year, and are provided with separate accommodations for males and females. A public laundry is conducted in connection with the establishment for persons who lack proper facilities for doing their family wash at home. The total attendance at the bath from the date of its opening, May 13, 1903, to the close of the calendar year, was 20,021, composed of 18,060 males and 1,961 females. The cost of maintenance for that period was \$2,000, and the receipts about half as much.

The bath and gymnasium are managed by an agent of Mr. Phipps, the latter paying all running expenses over and above the amount accruing from the fee of 5 cents charged for bathing privileges. He employs a competent teacher for the gymnasium at a salary of \$100 per month, and the children from the First Ward school, which is just across the street from the bath and gymnasium, are placed under her instruction.

PITTSBURG, PENNSYLVANIA.

As a result of private philanthropic effort Pittsburg has in operation at the present time two well-appointed public baths, while a third is now in course of erection and will be opened to the public at an early date. In addition to these, the city is soon to be presented with a fourth bath, which will be superior in many respects to those now in existence and which will cost about \$80,000. The following information pertaining to the several baths has been furnished by Mrs. Alfred Longmore, who, as a member of the Allegheny County Civic Club, has been prominently identified with the public-bath movement in Pittsburg.

PEOPLE'S BATH.

The first bath was opened in 1897, being a gift to the city from Mrs. William Thaw. It is situated at the intersection of Sixteenth street and Penn avenue, and is known as the "People's Bath." It is conducted under the auspices of the Allegheny County Civic Club, whose executive board appoints a committee charged with the management of the bath.

The building is constructed of brick and stone and contains 32 spray baths and 2 tubs. There are 34 dressing rooms for the use of bathers. The baths are open all the year and are supplied with both hot and cold water. Separate waiting rooms, as well as separate baths, are provided for the two sexes. Living apartments for the superintendent are also found in the building. The bath is self-supporting at the present time, the fee of 5 cents charged for use of soap and towel being sufficient to defray the actual running expenses. During the twelve

months ending October 1, 1903, the baths were used by 81,665 males and 3,900 females, of whom 7,566 paid nothing for bathing privileges. The total income for this period was \$3,959.76, and the cost of maintenance \$2,809.72. The cost of this bath, with its equipment, was \$45,000, including \$20,000 paid for the land upon which it is located.

PEACOCK PUBLIC BATHS.

The Peacock Public Baths were opened February 10, 1903. They are operated by the Columbian Council of Jewish Women in connection with their school settlement work, and are housed in a building of brick and stone costing about \$10,000. This house is situated in a densely populated tenement district inhabited mostly by foreigners and is said to have at least partly filled a most pressing need. Its erection was made possible by the generous gift of \$10,000 to the Columbian Council for this special purpose by Mr. Alexander Peacock. The bathing facilities consist of 10 showers and 4 bath tubs, besides a swimming tank 11½ by 26 feet. Hot water for the showers is provided by means of gas heaters, while the pool is heated by steam. Each shower compartment has a dressing space attached, while 6 additional rooms are reserved for persons using the pool. Separate baths and waiting rooms are provided for males and females. Living quarters for the superintendent are located in an adjoining building. Bathers over 12 years of age are charged 5 cents for a towel and a piece of soap, children being supplied with these articles free of cost.

PUBLIC WASHHOUSE AND BATHS.

From information received from the board of managers it is learned that a third bath is now in course of construction as a result of the efforts of an organization composed of ladies, formerly known as the "Clothing and Housefurnishing Bureau," whose object was primarily to furnish to the very poor people of the city partly worn clothing and furniture at low prices, the plan being devised to assist worthy people without making them objects of charity. The clothing and other articles thus furnished were contributed by persons in sympathy with the movement, the proceeds being used to defray the necessary running expenses and for the enlargement of the work. Later a sewing department was established in which deserving women were paid from 8 to 10 cents an hour for their work, they having the privilege of buying back at cost of material the garments and other articles made. The success of this work and the necessity for larger accommodations led to plans being considered for the erection of a building which should provide a public washhouse, baths for men and women, club rooms for men and boys, assembly rooms for meetings and entertainments, a day nursery, a storeroom, etc. Hearing of the project.

Mr. Henry Phipps, one of Pittsburg's philanthropists, offered to give one-half the cost of the lot and building, provided the other half was secured by a given time. To this generous offer he later added the promise to pay one-half the first year's running expenses. Other friends of the movement rallied promptly to its support and made it possible to proceed with plans for the erection of a suitable building. To carry on the work properly in its enlarged scope it was found necessary to secure a charter, which was obtained in the spring of 1902, the name of the organization being made "The Public Washhouse and Baths of Pittsburg." The building is located at the corner of Thirty-fifth and Butler streets and is constructed of brick, with stone trimmings. The bath equipment will consist of 20 showers for men and 12 for women, besides 4 bath tubs for the use of elderly women and children. Both hot and cold water will be provided. Each shower compartment will have a connecting dressing room sufficiently large for the needs of the bather. Living apartments for the superintendent and separate waiting rooms for the two sexes are provided for in the plans. It is also proposed to conduct in connection with the baths a public washhouse in which women may do their family washing under most favorable conditions and at merely nominal cost, thus relieving their small homes of the unpleasant and unhealthful features of wash day. The cost of this entire plant, including land, will be about \$60,000.

In addition to the baths enumerated above, plans have recently been prepared for a building which is to be the finest of its kind in the city, costing not less than \$80,000. This bath is the gift of Mr. Henry Oliver, of Pittsburg, to the people in his mill district, and it is the intention of its donor to endow it with sufficient funds to make it absolutely free to all.

PHILADELPHIA, PENNSYLVANIA.

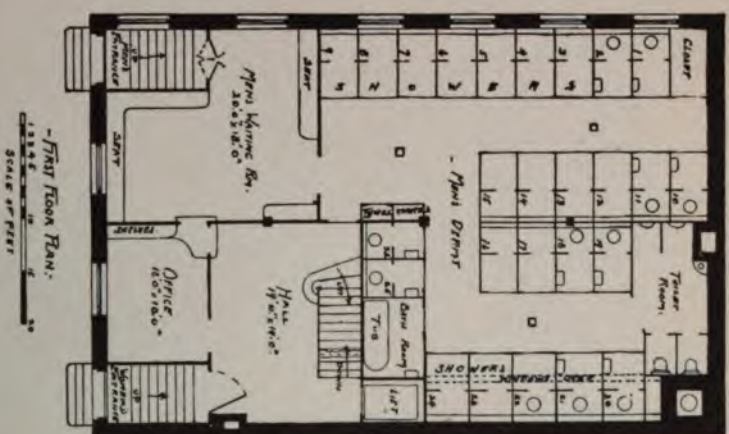
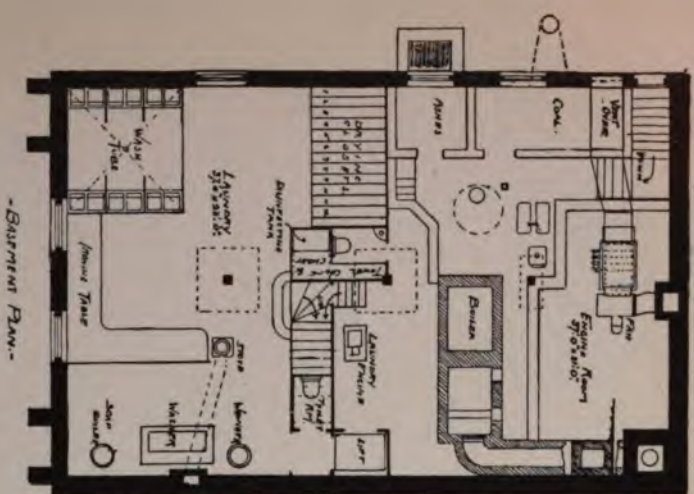
PUBLIC BATHS ASSOCIATION OF PHILADELPHIA.

The reports of this society state that its organization in 1895 was "the result of the convictions of a few public-spirited citizens who realized the great need of good bathing facilities for those without means of cleanliness at home." The free swimming pools operated by the city government, while doing a most useful work, are open only about three months in the year, and are patronized largely by the younger men and women chiefly for the sake of exercise and amusement. In some cases they are not located in the more densely populated portions of the city and do not reach the class of people most in need of them. Their lack of privacy also renders them objectionable to those desiring freedom from observation and contact with others while bathing. To remedy these conditions this association in April,



PLATE 160—GASKILL STREET BATH, PHILADELPHIA, PENNSYLVANIA





SCALE OF FEET
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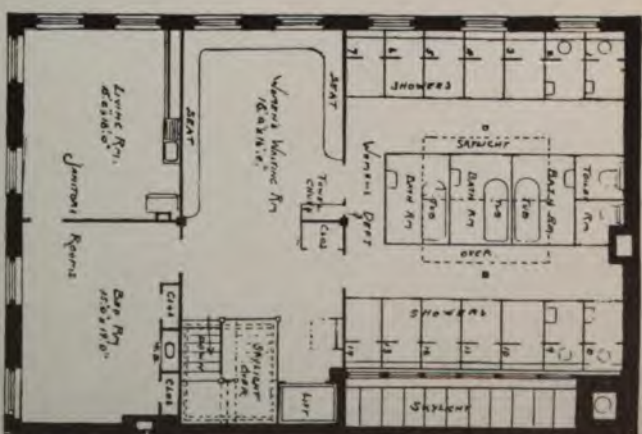


PLATE 161—GASKILL STREET BATH, PHILADELPHIA, PENNSYLVANIA



8, opened an establishment in which hot and cold shower baths, use of towel and soap, may be had all the year round for the all sum of 5 cents. This bath is located at 410-412 Gaskill street, one of the poorest and most thickly settled districts of the city, ere its usefulness is most apparent. The building (Plates 160 and) is a plain but substantial brick structure, two stories in height, l designed to give its patrons every modern convenience. It is cribed in a prospectus of the association as follows:

The men's entrance leads into a light and airy waiting room which ns into the men's baths. Here are 26 shower baths and 1 tub. e baths are separated by iron partitions painted white. The bather ers an outer dressing compartment, beyond which the shower bath, plied with hot and cold water, is located. The arrangement of the ssing rooms and bathing compartments insures privacy for each her, and the simplicity of their construction will greatly aid in ping them pure and clean.

From the women's entrance one enters a hallway from which stairs d up to the women's baths on the second floor and down to the sh room in the basement.

The women's waiting room is at the head of the stairway and beyond s the bathing department containing 14 shower baths and 3 tubs.

Half of the basement is fitted up as a public wash room where women do their family washing and ironing on the payment of a small , and where the towels used in the baths will also be washed. The om is fitted with 6 sets of tubs, 12 drying closets, ironing boards, a ndry stove, soap boiler, power washer and wringer, and the disin- ting tank to contain the towels thrown down through the towel chutes m the floors above.

The building has its own electric-light plant and system for forced tilation. Comfortable living quarters for the superintendent are ated on the second floor. In the loft above are placed the tanks ich supply the building with water and which have a capacity of 00 gallons. The baths are open every day in the year, the follow- ; schedule of hours being observed:

From May 1 to September 30, 8 a. m. to 9 p. m.

From October 1 to April 30, 8 a. m. to 8 p. m.

Saturday, till 9 p. m.; Sunday, 7 a. m. to 12 m.; holidays, 8 to a. m.

The total attendance at this bath during the year ending December 1902, was 62,377, composed of 55,704 males and 6,673 females. e number of free baths given was 3,923. The income from baths l washhouse for the year was \$3,671.15, and the cost of mainte- nce was \$5,002.64. The total cost of the bath including the lot, 40 60 feet in size, was \$29,903.70. No charge is made for children der 10 years when accompanied by parents.

Concerning the class of people who avail themselves of the privi- es offered by this bath, Mr. Franklin B. Kirkbride, chairman of

the finance committee of the association, stated in an address before the Maryland Conference of Charities and Corrections that—

Its patrons are of every sort, from the well-to-do shopkeeper to the shoeless tramp. White and colored, Jew and Gentile, meet here on equal terms and are one and all treated with civility and kindness. They pay for what they get and so are regarded in the light of patrons and in no way as the recipients of charity.

From information recently received it is learned that this establishment, laundry as well as baths, is now set apart for the exclusive use of men, accommodations for women being provided in a new building located on the opposite side of the street.

The immense popularity of this bath resulted in the opening of a second establishment in the spring of 1903. This is situated at 718 Wood street, a short distance from Eighth street, and cost, with land, over \$22,000. The building is of brick, two stories in height, with colonial front and separate entrances for men and women. The small but attractive waiting rooms are overlooked by a common office, from which towels and soap are issued on receipt of the fee of 5 cents. The bath equipment consists of 24 showers for men and 6 for women, giving a capacity of 84 baths per hour. No tubs are provided. Two large boilers in the basement furnish an abundance of hot water at all times. Living apartments for the superintendent and toilet accommodations for males and females are found in the building. This bath is under the same management as the one in Gaskill street, and, like it, is open all the year round.

A third bath house and laundry, exclusively for the use of women, was opened August 18, 1903. This building is situated at 413-415 Gaskill street, opposite the first public baths and washhouse, and cost, with land, \$8,998. The building and equipment are described in the Philadelphia Public Ledger, under date of August 30, 1903, as follows:

It is a neat, one-story building, colonial in design, its doors and windows painted spotless white. There is a wide entrance hall, around which a seat runs to accommodate waiting patrons on the busy days of the week, Friday and Saturday. It is a case then of taking one's turn, as the bathers sometimes number 900 or 1,000 daily. This hall appeals to one's artistic sense, with its green wainscoting and peach-toned calcimining on the walls and ceiling. Next to it is the laundry, in which when the writer saw it many women were busily washing clothes.

This laundry has some improvements over the older one, of course, but its equipment is in the main the same. Its floor is stone, and the stationary tubs set around the walls are of slate, each provided with a wringer. Along the side is a series of cabinets, where the clothes are dried by means of hot air. There are also ironing boards set on stands and a gas stove for the heating of irons. The charge for the use of the laundry, with all its conveniences, is but 5 cents an hour.

On the other side of the small building are the small rooms for bathers. Most of these are fitted with appliances for shower baths, these being the most sanitary for public use. Hot and cold water, or a mingling of both, can be had by simply turning a spigot according to the marks on a small dial. As before said, soap and a towel are supplied each bather when she pays her fee at the office.

Some of the rooms are fitted with porcelain tubs, and for a tub bath 10 cents is charged, the shower bath costing only 5 cents. There is no charge for children under 10 years when they accompany their parents.

This new building will be reserved entirely for the use of women, the older one at 410 Gaskill street now being set apart for men—laundry as well as baths. The house at 718 Wood street is used by both men and women.

A gratifying thing about the administration of all three buildings is the treatment accorded the bathers. Superintendent Ross is radical in theory and practice. He makes a point of treating every patron as such. Although the sums paid for baths do not cover the expense of them, no hint of this is given the bathers. No suggestion of charity creeps in anywhere.

SAN FRANCISCO, CALIFORNIA.

Although no municipal provision for public baths has yet been made in San Francisco, a number of baths are found in that city which offer facilities for bathing at a merely nominal cost.

JAMES LICK BATHS.

Among the numerous public benefits provided for in the will of the late James Lick was a public bath, for the establishment of which the sum of \$150,000 was set aside. By the terms of the bequest this amount was to be used for "the erection and maintaining in the city of San Francisco of free baths, the site or sites to be acquired and held in trust to forever maintain such baths for the free use of the public, under proper and reasonable regulation." These baths were placed under the management of a board of trustees composed of four members, who serve without compensation. The building, which was first opened to the public in November, 1890, is located on Tenth street, near Howard, on a lot measuring 76 by 113 feet, and is most substantially constructed and equipped, requiring a minimum of expense for repairs. It is built of brick and stone and is two stories in height, the upper floor providing living accommodations for the superintendent and the lower floor being devoted to the baths. The total cost of the building and lot was a little more than \$125,000. The water for the baths is pumped from an artesian well, which affords a full and free supply at all times. There are 20 bath tubs for the use of women and 40 for men, all supplied with hot and cold water. No shower baths are provided, it being claimed that the tubs answer every requirement. The number of dressing rooms is 60. The water is

heated by steam from two large Scotch marine boilers, the use of oil as fuel having been adopted about two years ago. A laundry for the care of towels forms a part of the equipment. The baths are open daily, except holidays, the following hours being observed: Saturday, from 1 to 8 p. m.; Sunday, from 7 to 10 a. m.; other days, from 1 to 7 p. m.

A fee of 10 cents is charged for bath and use of towels, but persons unable to pay are allowed all privileges free of cost. It was the intention of the founder that the baths should be entirely free to all persons, but it was found that they could not be maintained on the small margin remaining after paying the cost of the building and equipment, and a charge for the use of soap and towels was accordingly made. During the first six years of the bath's existence this charge was limited to 5 cents, which resulted in the expenses for that period exceeding the receipts from all sources by about \$22,000. A new board of trustees raised the charge to 10 cents, since which time the income has been sufficient to maintain the baths and meet the wear of the boilers, which have been once replaced. Only the fortunate circumstance of owning surplus land, however, enables the baths to be operated without loss. This land, which adjoins the bath property and is much more valuable than when purchased, is rented for laundry and store purposes. The average number of baths given per annum is now only about one-half of what it was while the 5 cent rate was in effect, but the expenses have been lessened proportionately, so that loss is now avoided. During the year 1902 the total number of persons availing themselves of the bathing privileges was 55,719. The patronage is very steady all the year round, and on such days as warm Saturdays the capacity of the 60 tubs is taxed to the utmost. The income and expenditures for 1902 are shown by the following items:

Income:

Rent of lots adjoining the baths	\$3,360.00
Interest on deposits	83.82
Towel-fund receipts	5,571.90
Total income.....	<u>9,015.72</u>

Expenditures:

General expenses.....	7,211.46
Taxes	758.19
Total expenditures	<u>7,969.65</u>

The excess of receipts over expenditures, \$1,046.07, was invested in a plant burning fuel-oil, which has resulted in a saving of about \$40 per month as compared with the use of coal.

LURLINE BATHS.

These baths are operated by the Olympic Salt Water Company, which was formed with the view of supplying the people of San Francisco with pure ocean water for bathing purposes. The building, erected in 1893, is situated between Larkin, Bush, and Austin streets, its three frontages insuring an abundance of sun, light, and air. It has an elevation of 55 feet, a width of 120 feet, and a depth of 270 feet, covering a ground area of over 32,000 square feet. The total cost of the building and equipment, including a recently constructed annex, was \$135,000. The principal feature is an immense natatorium, 70 feet wide by 150 feet long, with a depth varying from $2\frac{1}{2}$ to 10 feet, and a capacity of nearly half a million gallons. At the deeper end are located high diving balconies, springboards, toboggan slides, and other provisions for the enjoyment and convenience of bathers. The water in the tank is pumped directly from the ocean through 8 miles of piping, and is kept at an even temperature by means of two 80-horsepower boilers located in the basement of the building. The supply is renewed daily, the tank being emptied and thoroughly cleansed every night at 10 o'clock. This bath is reserved exclusively for women on Tuesday and Friday mornings between the hours of 10.30 and 12.30.

In addition to the natatorium the bath equipment comprises a number of tubs of the most approved pattern, supplied with both salt and fresh water. Hot and cold shower baths are also provided. A recent addition is a Russian steam bath, with needle shower, which provides a continuous supply of oxygen, thus enabling the bather to remain in the bath as long as he may desire without any sense of oppression or feeling of discomfort. Other popular features are parlors for women and men, a barber shop, a boxing and fencing room, and a café where refreshments and meals may be obtained. A laundry, in which the bathing suits and towels are thoroughly washed and subjected to a temperature sufficient to destroy everything of an infectious nature, forms an important adjunct to the baths. A competent swimming instructor is always in attendance at the natatorium. The following schedule of prices is observed:

SWIMMING TANK.

Adults.....	\$0. 25
Children under 15 years of age	. 15
Clubs purchasing 250 tickets or more, and providing their own suits, at	. 17½
Clubs purchasing 50 to 250 tickets, including use of company's suits, at	. 20

TUB BATHS.

Single tickets.....	\$0. 30
Four tickets.....	1. 00
Russian steam bath, including swim and needle shower.....	. 50
Spectators	. 10

SUTRO BATHS.

These baths, which are in some respects the most remarkable in this country, are located north of the celebrated Cliff House in Golden Gate Park. They were built by Mr. Adolf Sutro, one of the best-known citizens of San Francisco and at one time its mayor.

This immense plant includes in all six tanks, surrounded by tiers of seats. The largest tank contains the sea water at its normal temperature, while in the others the water is heated to different temperatures to suit the varying requirements of the bathers. From a description published by the Free Bath and Sanitary League of Chicago in 1897, it is learned that the sea water is supplied by an ingenious use of the ocean waves. Should pumping be necessary, however, by reason of low tides preparations have been made whereby the water can be forced in at the rate of 6,000 gallons a minute. The tanks are emptied in such a manner as to prevent the returning to the tanks of the once-used water. This is accomplished by means of a pipe hundreds of feet in length running to the other side of the headlands which delivers the waste water into the tidal current, which carries it away from the baths.

Some conception of the equipment of this establishment may be gained from the following figures:

- Length of baths, 499.5 feet.
- Width of baths, 254.1 feet.
- Amount of glass used, 100,000 superficial feet.
- Iron in roof and columns, 600 tons.
- Lumber, 3,500,000 feet.
- Concrete, 270,000 cubic feet.
- Seating capacity—amphitheater, 3,700; promenade, 3,700.
- Holding capacity, 25,000.
- Tanks, 6.
- Capacity of tanks, 1,804,962 gallons.
- Fresh-water plunge-tank, 1.
- Toboggan slides in both, 7.
- Springboards, 9.
- Trapezes, 3.
- High dive, 1.
- Swinging rings, 30.
- Dressing rooms, private, 517.
- Club rooms, 9; capacity, 1,110.
- Total capacity, dressing and club rooms, 1,627.
- Shower baths in all club rooms, 37.
- Shower baths in private dressing rooms, 29.
- Time required to fill tanks by waves, 1 hour.
- Time required to fill tanks by pumping, 5 hours.

A fully equipped laundry is attached to the baths, with a capacity of 20,000 suits and 40,000 towels a day. A restaurant is also found, consisting of three floors, 30 by 75 feet each, with a capacity of 1,000

persons at one time. A kitchen, 30 by 50 feet, contains every necessary appliance and can readily provide for the wants of 6,000 visitors. The baths are protected by enormous breakwaters, and nothing has been omitted in the construction of the vast buildings that could add to the safety and comfort of the visitor. The baths are within easy reach of the city by electric cars.

SPECIAL BATHING APPLIANCES.

The provision of public bath houses where large numbers of bathers must be served daily involves the use of special appliances. The shower appliances have been developed largely because of the necessity of the most economical use of water under such circumstances, and it is the success of the shower bath that has made the present public-bath movement possible. Typical showers are those used in one of the recently constructed New York public baths (Plate 162).

These showers consist of an overhead douche or ring, the water supply to the same being controlled by a nonscalding mixing valve, so arranged that in turning on the water the cold water is turned on first by one turn of the wheel; the second turn of the wheel opens the hot-water supply port, thus giving the user the hot and cold water mixed; the third turn of the wheel gradually opens the hot-water port to its entire capacity and gradually closes off the cold. This is arranged this way so that the bather can get the hot water at a high temperature, if desired. To turn the shower off it is then necessary to turn it back the full three turns, so that when opened up again the cold water will always come first.

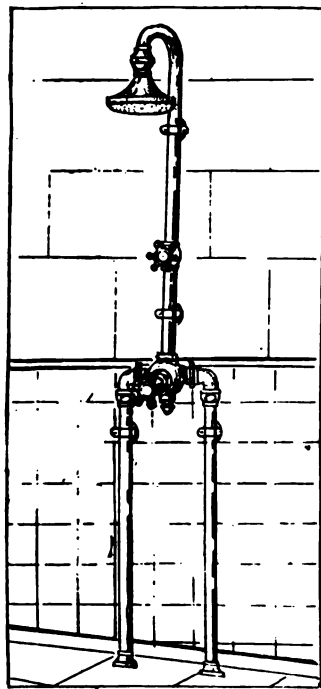


PLATE 162.—TYPICAL SHOWER APPARATUS.

The plans of the shower bath, showing the shower cabinet and dressing room as used in a recently built New York bath, will be of interest in this connection. The floor plan, front elevation, and longitudinal section are reproduced on the following page.

In the same bath the hot-water supply apparatus may be taken as an example of the most advanced methods. The bath is provided with high-pressure steam boilers, which furnish steam to the engine running the pumps, electric-light dynamo, laundry machinery, etc.

Steam from these same boilers is also used for heating the water for the showers by means of a combination apparatus, using both the live steam and the exhaust steam from the engine.

A large water tank is also installed, the same being $\frac{1}{2}$ feet in diameter and 10 feet long. This tank is fitted up with a $\frac{1}{4}$ -inch copper coil, which is connected to the exhaust steam from the engine.

The water supply for the showers is piped from the city supply to this tank, and by means of the exhaust-steam coil is partly heated. This

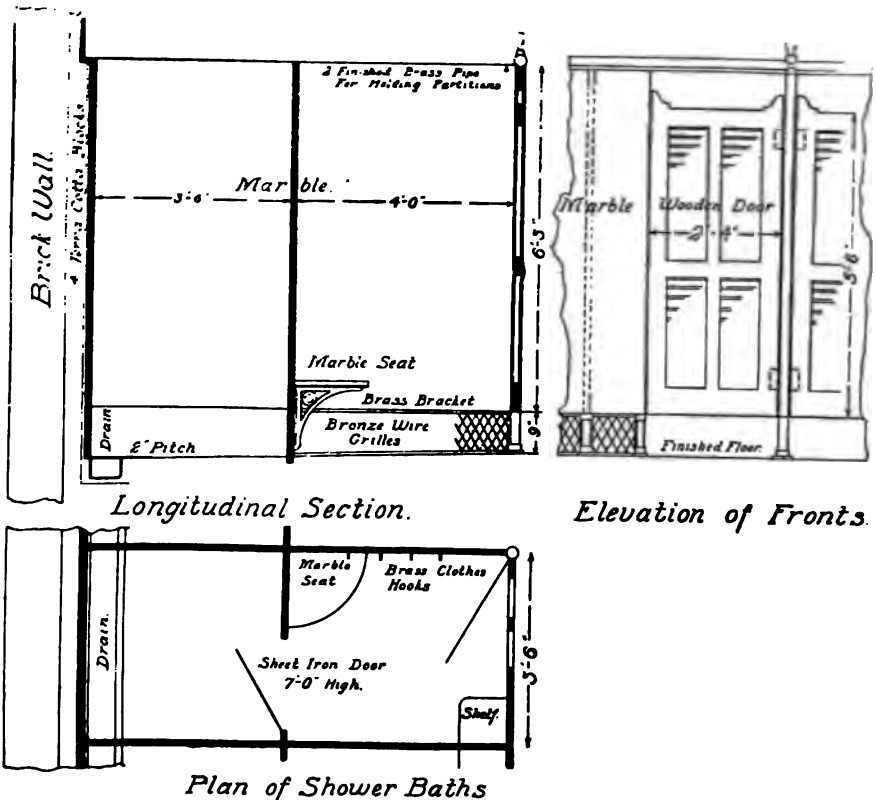


PLATE 163.—PLAN OF TYPICAL SHOWER BATH.

partly heated water is then piped or fed into two automatic heaters, to which live steam is connected up. These two heaters then heat this water to the required temperature.

In these heaters the temperature of the water is automatically regulated by a device so simple and accurate that a variation of 2° in the temperature of the water will operate it, which enables the heater to deliver the water evenly at any desired temperature at which it is set. Whether a small amount of water is being drawn from the heater, or the heater is delivering water to its full capacity, the temperature will be the same.

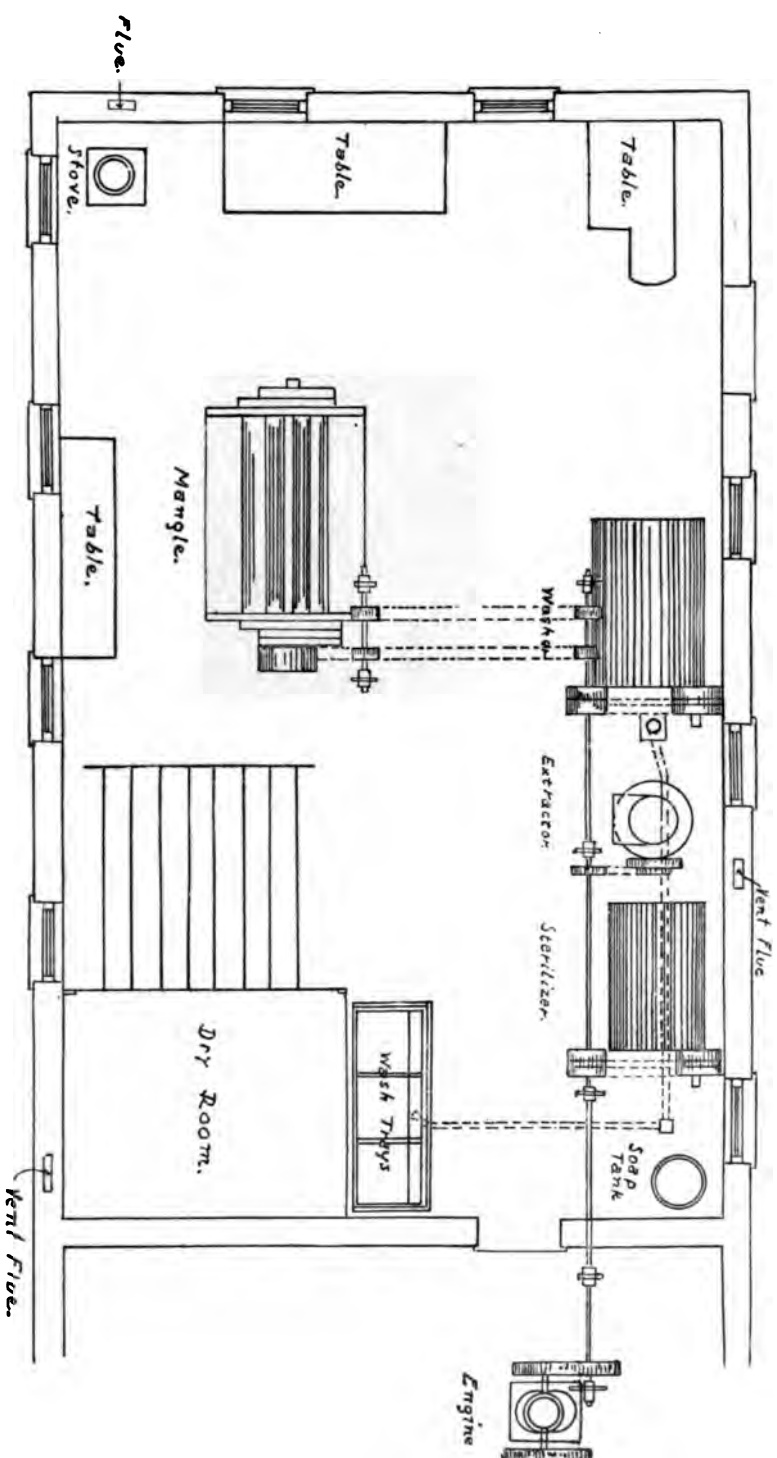


PLATE 164—PLAN OF TYPICAL LAUNDRY IN PUBLIC BATH



The regulating device consists of a diaphragm valve, through which the steam passes, and a thermostat valve, which is operated by the varying temperature, which opens or closes a vent, allowing the water from the heater to pass into the small pipe leading to the diaphragm of the valve. The latter is thus automatically opened or closed and the steam correspondingly turned on or off.

The plan of a typical laundry outfit for a public bath—such outfit as is necessary for the laundering of bathing suits, towels, etc., is shown herewith (Plate 164). Such a plant, it will be seen, requires an engine or motor, a sterilizer, a washer, an extractor, a mangle, a drying room, washtubs, a soap tank, a stove, and ironing tables. All of these machines are made of varying capacities, suited to the largest or to the smallest bath house.

The shower baths have attained great popularity in use abroad, especially in Germany, both in manufacturing establishments, where they have been quite extensively installed, and in people's baths. Dr. Edward M. Hartwell, in an article on "Public baths in Europe," which he prepared for the Bulletin of the Bureau of Labor in 1897, thus writes of the form most favored by German experience:

In 1889 a general exposition of devices for the prevention of accidents was held in Berlin. The German Association of Brewers offered a prize of 1,000 marks (\$238) for the workman's bath which should best commend itself to the judges for utility, solidity, practicability, simplicity, and inviting character, and be adapted for use in breweries and for general use as well. There were presented in competition 5 models, 13 sets of plans, and 4 baths in running order. The prize was divided between Börner & Co., of Berlin, for a Lassar-Grove workman's shower bath, and the German Jute Spinning and Weaving Company, of Meissen, for a workman's shower bath, while 4 firms received honorable mention.

The judges unanimously recommended that certain principles be followed in the construction of workmen's baths, as follows: ^(a)

"In general, the shower bath is to be characterized as the most practicable of all sorts of bath for the promotion of cleanliness and simultaneous refreshment. For certain kinds of industry it is necessary to provide washing facilities in addition, to enable the bather to free himself from adhesive dirt.

"Regarding the construction of shower baths, all material is to be avoided that is porous or attractive to water, or permits dirt to accumulate in cracks and joints, or renders complete cleanliness of all appurtenances difficult or impossible. * * * Leaving slate out of the question as too costly, there is nothing better for the walls of the single cabins than corrugated sheet zinc. Next to be recommended are the so-called "Monier" walls, but only when their surface is well smoothed. The durability of oil paint is not satisfactory, owing to the continuous influence of warm water and soapsuds.

^a Arbeiter-Badeeinrichtungen. Ansichten und Grundsätze des Preisgerichts über die vom deutschen Brauerbund ausgeschriebene Preisaufgabe. By B. Knoblauch.

"The partitions should be 2 meters (6 feet 7 inches) high and about 10 centimeters (4 inches) raised above the floor for the sake of ventilation.

"The floor should also be made impervious to water by the use of asphalt, cement, or terrazzo. The first has not only the advantage of cheapness, but also that it is least unpleasant to the naked feet. In order to prevent the splashing of water from the bath cabin to the dressing cabin, the latter should be placed at a higher level than the former; and in order to avoid a step, the floor of the dressing room should slope sufficiently toward the bathroom. In the bath cabin itself there should be a recessed portion in the floor, like a trough, whose deepest part receives the principal stream from the shower, and at the beginning of the bath should be so full that the water reaches to the ankles of the bather. This will permit the bather to soap himself thoroughly before using the spray and at the same time cleanse his feet. The rest of the floor of the shower cabin should slope toward the trough, whose edges should be rounded. At the deepest part an emptying valve is to be placed, and at the highest part an overflow pipe. * * * In almost all cases the use of such trough renders the provision of a special wash basin unnecessary. * * *

"The use of wood is to be avoided as much as possible. * * * The shower spray should be placed obliquely, as the water streaming vertically from above is undesirable for weaker persons and those liable to 'rush of blood to the head.' The most appropriate place for the spray nozzle is on the partition wall between the dressing and the bath cabins, to be fed from a warm-water reservoir having an exit temperature of 95° F. The limitation by a measuring device of the maximum amount of warm water, which is commendable in people's bath establishments, appears to be superfluous for workmen's baths in factories.

"The spray should run only so long as the bather pulls the chain; but in order that he may have his hands free for washing during the action of the shower, it is desirable that a hook, to which the chain may be fastened, should be placed on the wall. The necessity for an unlimited supply of cold water seems to be self-evident.

"The dressing room should be about the same size as the bath cabin, and should contain a seat, shelf, clothes hooks, well separated from each other, and a pair of washable rubber sandals with straps over their middle, in order that the bather need not step directly on the stone floor. A looking-glass becomes dimmed in such a room, and is therefore better placed in the corridor. Combs and brushes had better not be furnished, since through their common use diseases of the scalp are easily incurred.

"The heating of workmen's baths in factories is most serviceably accomplished by means of steam. It is desirable, if possible, that all the bath arrangements should be placed in a thoroughly heated room.

* * * * *

"The following demands must be met in order to provide appropriate bath features for our workmen: The greatest possible utility in the least possible space; cheapness of plant and operation; easy and convenient cleansing of the bath and dressing rooms; avoidance of wood or of porous material; rational position of the shower nozzle (at an angle of 45°) out of regard for weakly persons; opportunity to remove adhesive dirt, particularly from the feet; protection against catching cold; avoidance, therefore, of drafts of cold air."

The principles enunciated by the judges chosen by the German Brewers' Association in 1889 have been quite closely followed in most respects in constructing the model bath house which was exhibited at the Berlin Industrial Exhibition of 1896 by the Berlin Society for People's Baths, a description of which is given below.

The first German shower-bath establishment to attract wide attention was placed in the barracks of the Kaiser Franz Grenadier Regiment of the Guard in Berlin in 1878, at the instance of Doctor Munnich, a military surgeon. The bath was for the use of officers and soldiers, and was constructed at a cost of about 4,000 marks (\$952), so as to permit 300 men to bathe within an hour. It was devised by the firm of David Grove, sanitary engineers, in Berlin. Previous to its installation military barracks were without shower baths for the use of soldiers. It is said that they are now to be found in more than fifty barracks of the German army.

The same firm installed 11 shower baths of their peculiar pattern prior to 1883. Eight of the 11 were placed in garrison buildings for the benefit of soldiers. In the period from 1878 to 1894, inclusive, this firm installed shower baths in no less than 37 military barracks. Its baths have also been placed in various schools, prisons, factories, and people's baths.

In 1883, at the Exposition of Hygiene in Berlin, Dr. O. Lassar exhibited a people's bath house, simply constructed, 11 meters (36 feet 1 inch) long and 5 meters (16 feet 5 inches) wide, built of corrugated iron, by David Grove, at a cost of 6,300 marks (\$1,499). It was divided by a middle partition into two sections, one for women and one for men, each section having its own separate entrance. The building was of one story and contained, besides a ticket office, 2 water-closets, 2 corridors, a laundry, a drying room, a boiler room, and 10 shower-bath cabins (5 for men and 5 for women). Each shower cabin was 1½ meters (4 feet 11 inches) square, and one corner of the cabin could be closed off by a curtain. The bath house was used by upward of 10,000 persons during the three months of the exposition. This particular bath house was afterwards purchased by a manufacturer and set up for the use of his workmen.

People's baths similar to this, and known as the Lassar-Grove form of people's baths, have since been built in a number of German cities, as, for instance, Munich, Magdeburg, Hanover, and Frankfort. In these, as well as in the city people's baths in Vienna, the bath cabins are furnished with shower baths exclusively. The usual price for shower baths in this class of people's bath is 10 pfennigs (2½ cents).

The Berlin Society for People's Baths, of which Dr. O. Lassar is president, exhibited a model people's bath house (Plates 165, 166, and 167) in working order at the Berlin Industrial Exhibition during the summer of 1896. The model, with its fixtures, cost 20,000 marks (\$4,760), and the following is a description of it:

"The establishment comprises 10 shower cabins. Five cabins and a water-closet are placed on each of the corridors, which open to the left and right, respectively, from the waiting room. By extending the corridors and adding further cabins it would be easy to enlarge the bath, and by putting a partition through the waiting room to establish separate sections for men and women.

"Cabins, corridors, and waiting room are on the same level, which is raised two steps above the ground level. On the other hand, the boiler room is sunk 1.60 meters (5 feet 3 inches) below that level, while the floor of the laundry, which is above the boiler room, is 1.60 meters above the same level. Two advantages arise from this: First, the short distance of half a stairway from the boiler room to the waiting room and the corridors on one hand and from the laundry to the waiting room on the other; second, if a cellar be placed under the shower-cabin section, adjoining the boiler room, then a room accessible in all its parts at all times and free from frost would be provided for the installation of the plumbing.

"Again, entrance might be had through the laundry by means of a half stairway into a room situated above the waiting room, in which room a reservoir for serving shower baths is placed. This room in certain cases might be used as the living room of the attendant. The reservoir would then be placed in the attic above the laundry.

* * * * *

"The cabins are inclosed by walls of first-class Carrara marble, which is placed upon brass supports and fastened together by cramp irons. The floor consists of a layer of cement, over which a light latticework is placed in the dressing rooms and bath cabins. The dressing rooms are shut off from the corridor by washable curtains.

* * * * *

"Shower baths hitherto have involved an inconvenience in that they supplied water to the bather only from above, on which account a thorough cleansing of all parts of the bather's body was rendered difficult. The shower bath exhibited here has on that account been constructed upon another principle, which renders it possible for the bather not only to supply himself with water from overhead, but also, by means of the three side pipes (marked *b* in the plan) of the so-called "mantel" shower (needle) bath, and by means of an obliquely placed under shower, to spray himself from both sides and from below. Each of these three devices is placed under the control of the bather by a special contrivance. The bather stands in a depression in the floor, which forms a foot tub, *d*, which, when the showers are opened, fills with water that covers his feet as high as the ankles. The surplus water runs off through the overflow pipe *c*. After the bath the overflow pipe is taken out, whereupon the foot tub completely empties itself.

"The overhead shower *a* has a cold water supply with a separate cock, by means of which the bather can lower the temperature of the water at will.

"The heating of the water is effected through a hot-water circulation boiler *f*, which is connected with the reservoir *g* by circulation pipes. The heating of the water may proceed as high as 95° F. The temperature of the water is made clear to the fireman in the boiler room by means of a thermometer. If the desired temperature is attained, then he closes the throttle valve *i* placed in the perpendicular leading pipe.

"The heating of the building is provided for by means of a hot-air apparatus *k*, that stands in the boiler room. The building is also provided with a small laundry sufficient to meet the demand for the washing and drying of towels. The drying apparatus receives its heat through circulation tubes from the hot-water boiler.



First floor.

PLATE 165—MODEL BATH HOUSE OF THE BERLIN SOCIETY FOR PEOPLE'S BATHS, BERLIN INDUSTRIAL EXHIBITION, 1896



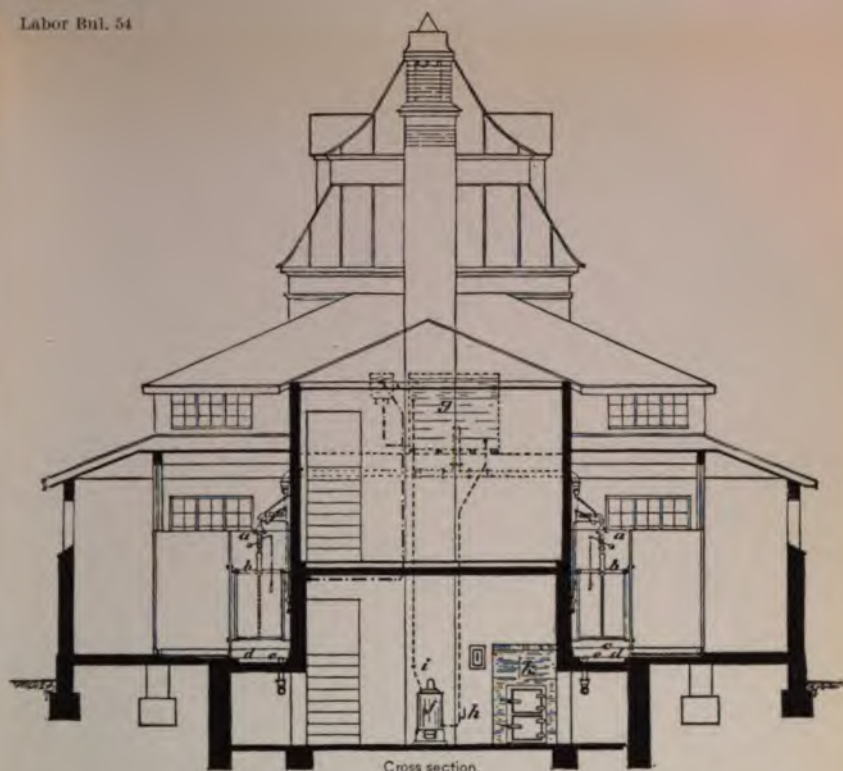
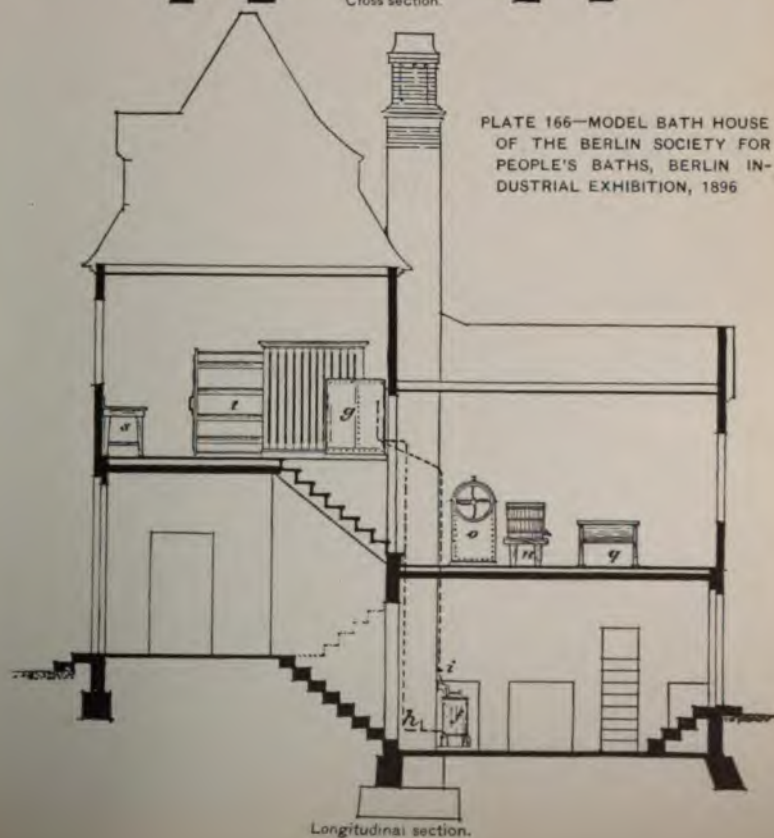


PLATE 166—MODEL BATH HOUSE
OF THE BERLIN SOCIETY FOR
PEOPLE'S BATHS, BERLIN IN-
DUSTRIAL EXHIBITION, 1896





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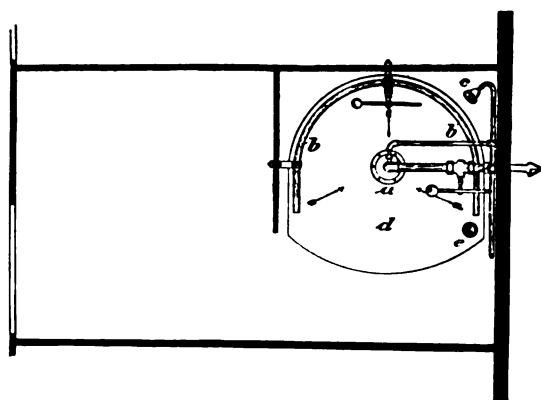
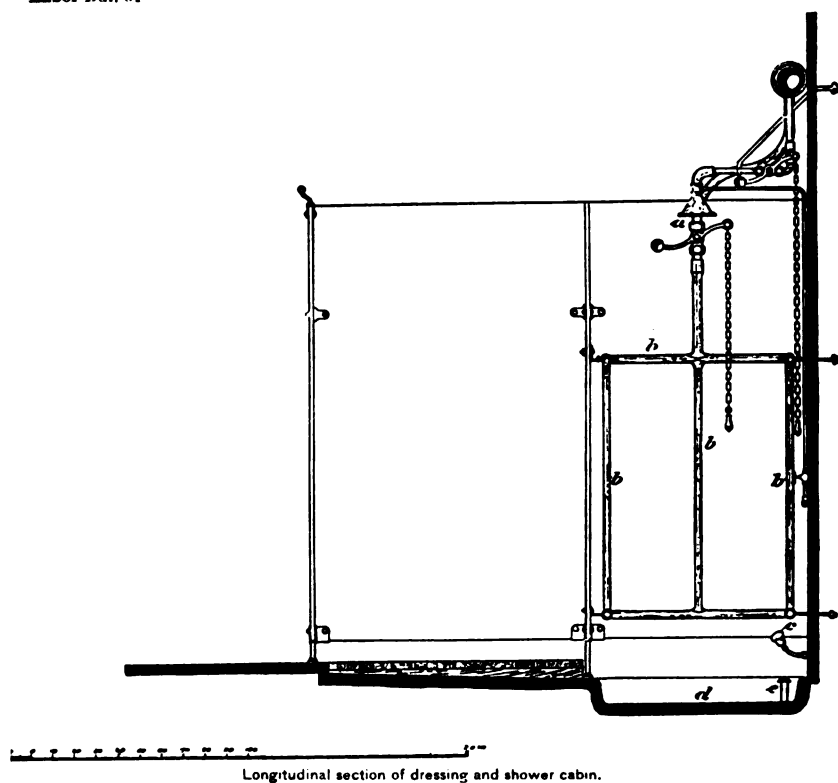
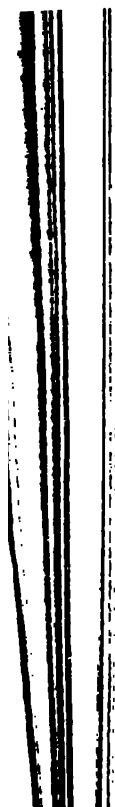


PLATE 167—MODEL BATH HOUSE OF THE BERLIN SOCIETY FOR PEOPLE'S BATHS, BERLIN INDUSTRIAL EXHIBITION, 1896



"With 10 cabins the bath is equal to providing from 30 to 40 shower baths per hour." (^a)

This model workmen's or people's bath house not only embodies the requirements laid down by the judges chosen by the Association of German Brewers in 1889 to award a prize of 1,000 marks (\$238) for the best plan or model of a workman's bath, but in some respects it is an improvement on the specifications of the committee of award, viz, in the use of marble and of the mantel shower fixture.

To the writer, who had an opportunity to make careful inspection of the model people's bath house described, it seems to be extremely well planned and admirably adapted for its purpose. It is his opinion, however, that the cost might possibly be reduced and the arrangement of fixtures considerably simplified if improved methods of heating water were made use of in baths modeled after it, at least when there is an independent supply of steam. The footbath feature has been employed elsewhere and is strongly to be commended. The use of marble for partition walls is a novelty in most people's baths. In the end its use will probably be justified by its superior durability and cleanliness. In the newest of the public baths in Paris, the Piscine, in the Place Hébert, the walls of the shower-bath cabins are of opaque glass set in iron frames. Sheet glass inclosing woven wire is used for partitions in some bath houses, the people's bath near Schilling's bridge, in Berlin, for example. The partition walls in the shower rooms in the Vienna people's baths are of cement on wire lathing and are unpainted. In one of the newest and finest private bath houses in Berlin the walls of the shower cabins are painted with a peculiar Japan lacquer paint, so called, which is said to withstand heat, water, and soapsuds, and to be suitable for application to wood, stone, metals, or cement. A somewhat similar kind of paint has been used upon the wooden dressing-room doors in the swimming hall of the Pompeian Bath, belonging to the parish of St. Marylebone, in London. Enameled slate, as used for partitions and doors of private bathrooms in the Whitworth baths, Manchester, and the baths belonging to the London parishes of St. Martins-in-the-Fields, St. Mary Stratford Bow, etc., is said to fleck and chip unless it is carefully treated.

^a Die Thätigkeit des Berliner Vereins für Volksbäder, 1896.

and to the industries of the country, and, second, a description of the leading individual schools, showing their aims, equipment, and management, courses and methods of instruction, and statistical details. Besides this material, which formed the bulk of the report, the results of special original investigations were given and discussed at some length in chapters on the kindergarten in relation to manual training, manual training in conjunction with book work, manual training and trade instruction in reformatories, and the effect of industrial education upon the individual.

The Seventeenth Annual Report differs in several important particulars from that of ten years before. In the earlier report industrial education was considered in the broadest sense. Considerable space was devoted to manual training, then just becoming firmly established in the public schools. The agricultural colleges and the institutes of technology were also included, as representing the earliest schools with an industrial tendency, although both classes are perhaps largely in the category with colleges and professional schools. In the later report only industrial schools, properly so called, were studied, and the classes of schools just mentioned were omitted from any detailed treatment. Manual training seems to have made for itself a permanent place in the public school work, not as a means of teaching trades or even the elements of any trade, but as an educative study in the same way as drawing, which preceded it in the public schools only a few years, or any bookwork of the school course. The schools of technology were entirely omitted. Their graduates, it is true, go into many industries, but the school training is specialized in purely scientific rather than in industrial lines. The agricultural colleges have developed to a large extent in the same direction as the technological schools, although all of them offer courses of college grade on agricultural lines. The rule was adhered to of considering no course of instruction which led to a degree. A somewhat recent development in connection with agricultural colleges—the dairy school—was described at some length in the later report. It represents one of the most notably successful efforts to benefit an industry by the application of scientific knowledge to its processes.

In the later investigation, as in the earlier one, it was the purpose to present outlines of the systems in use in European countries and details of typical trade and technical schools of each class, showing especially such facts as the aim of the school, equipment as to grounds, buildings, laboratories, and workshops, machinery and tools, etc., endowment, costs, method of management and maintenance, instructors, courses and methods of instruction, number of pupils, number of graduates, etc. Special inquiries, also, were directed to securing suggestions as to the improvement of the instruction in the schools investigated, and to ascertaining the influence of the schools upon the

pupils, upon apprenticeship, and upon any industries, as well as the attitude of employers, of school graduates, and of labor unions toward industrial education.

Having indicated some of the schools which were passed over in making this investigation, it will be necessary to indicate the classes of schools which were considered as industrial, properly so called, and included in the report. It should be said, however, at the outset that usage in regard to such terms as manual training schools, trade schools, and technical schools is far from uniform. It will be the purpose here merely to indicate in a general way the characteristics of the several classes of schools.

In general, the schools included in the report are of three classes, namely, trade schools, technical schools, and schools of industrial drawing and design.

In the trade school in its simplest form the instruction is confined entirely or chiefly to the workshop, and consists in perfecting the pupil in the practice of the manipulations and operations of skilled workmen at particular trades. These schools differ according as the practice work extends over a longer or shorter period and as more or less explanation and instruction in scientific principles are added to give a thorough understanding of the practice work. They are apprenticeship schools, and usually claim to graduate apprentices fully equipped except as to speed, it being generally considered that this is better acquired under ordinary working conditions in the trade.

The sole or primary aim of the trade school is to give the pupil a thorough practical knowledge of some handicraft. Incidentally much general information may be imparted in connection with the trade instruction, especially in drawing, mathematics, and scientific branches, but always in direct application to the work of the trade. Thus the trade school is clearly distinguished from the manual training school where instruction is given in various kinds of tool work as an educational discipline. The difference may be illustrated by contrasting the course pursued in the New York Trade School, for example, with that in the St. Louis Manual-Training School, and in the public manual training high schools. In the one, the course is of short duration and is limited to a severe drill in the theory and practice of a trade. The course in the others lasts three or four years, comprising high school studies, with manual practice in wood and iron work as a coordinate branch of education.

In some of the newer American trade schools, the Williamson School near Philadelphia and the two San Francisco trade schools, for instance, we have a new type of school. The practice in the operations of the trade has been extended over four years, and the theoretical instruction covers substantially the same subjects as that in the manual training

high schools, with special adaptation in the last half of the course to the particular trade which the pupil is learning. The aim of these schools is to give their graduates a much broader educational foundation to the trade than is possible in the short courses of the New York Trade School. The pupil is taught not only how to perform every operation expected of a skilled workman in the trade, but to understand thoroughly the scientific principles involved in each operation. Such training is expected to insure rapid advancement beyond the grade of journeyman.

Training in trade schools in the United States is intended to supply the place of the old-time apprenticeship, which has nearly disappeared under the conditions of present day industry. The trade school graduates in many cases are able to begin work at the trade at wages but slightly less than those of the practiced journeyman, and after a little experience receive full journeymen's wages.

The courses of instruction in most American trade schools have been arranged to train pupils in the shortest possible time to become wage-earners at the trade. This has been the result of the demands of both pupil and parent; the teachers and the employers are practically a unit in urging longer school preparation. In the foreign schools, on the other hand, longer and more detailed courses are the rule. This has been largely due to the restraining influence of the labor unions and their insistence upon the full period of apprenticeship. As the American schools grow in resources and pupils the tendency is to lengthen and improve the courses.

In the technical school in its simplest form the instruction is limited entirely or chiefly to the school room or the laboratory, and consists in only such use of tools and machines by the instructor as will clearly illustrate the application of the theoretical and scientific teaching to the particular trades. Many such schools make no provision for the use of tools or machines on the part of the pupil. Others introduce a good deal of such practice that the pupil may acquire a familiarity with all the processes of the trade. But the important distinction is that the school is supplementary to the work at the trade. The courses are arranged to provide theoretical and scientific instruction adapted for apprentices and workmen already at work at their trades. The purpose is to give the workman an understanding of the scientific principles involved in the work that he may be called upon to do at his trade and to increase his intelligence generally.

Most of the schools of this class are evening schools. Good examples of schools offering such instruction in this country are the school of Hoe & Co., the printing press manufacturers, Drexel and Spring Garden institutes, Rochester Athenaeum, the Young Men's Christian Association schools, and the correspondence schools. In England this is the favorite type of instruction. Most of the instruction in the

schools known there as polytechnics and technical schools is of this character. These English schools are officially regarded as wholly technical and as in no case taking the place of apprenticeship, the teaching of the practice of trades being expressly forbidden by the act under which they came into being and under which they derive their support. The technical instruction is very highly specialized and the shopwork is to explain the scientific instruction, to enable the pupil to learn how to do—but carefully refrains from giving sufficient practice to enable the pupil to acquire dexterity or in any manner do away with the necessity of a regular apprenticeship in the trade. In fact in nearly all these English schools only those who are at work in the trade already are permitted to receive the benefits of the instruction. This has been a necessary concession to organized labor.

The influence of the English labor unions and the rigidity with which the would-be artisan is held in control will be appreciated when the length of apprenticeship—as much as seven years in some cases—is compared with the preparation demanded in this country and the elasticity of even this requirement. For while three or four years' apprenticeship is required here, it is not to be doubted that many attain to journeymen's full wages without ever undergoing any such exacting service. This is rendered much easier by the facility with which the workman can move from place to place. But the length of the apprenticeship is not all the difference. During the long period of the English workman's apprenticeship very low wages are received, while in the United States the apprentice from the beginning earns a living wage. The greater number of opportunities open to the bright ambitious boy in this country is in large part the cause of this great difference.

In Germany also the private-shop apprenticeship with evening and Sunday instruction is favored. Education is compulsory up to the fourteenth year, but the great majority of the laboring classes begin work at this age. For the special purpose of continuing the instruction of the young workers after they are forced to enter the shops to earn a livelihood the so-called continuation schools were created. They proved so well adapted to the needs of the workmen that they have been specialized for particular trades and have multiplied all over the Empire.

As the length of the period of instruction in the trade school increases the amount of theoretical instruction is added to more and more. In the continental countries in many cases trade schools of very high grade are known as technical schools; in these, while a craft is taught, the scientific principles upon which it is grounded are also exhaustively studied and exemplified in their applications to art and industry.

Such also are the American textile schools modeled on the older

German textile schools. These schools, like those in Germany, represent a direct effort on the part of the textile interests to foster a local industry by the education of the workmen in art and science as applicable to manufacture. They represent, too, the most important instances in this country where trade schools have received the assistance of the State and the municipality. These textile schools are all trade schools, but in their longer courses, extending over four years in the day school, the most thorough scientific and technical instruction is given.

In the schools of industrial drawing and design general instruction is given in free-hand and mechanical drawing and in design applied to various industries. In the best of these courses a good deal of attention is given in the latter part of the course to the study of the processes of manufacture, that the designer may understand the practical requirements of each particular product. Much practical good has already resulted from this kind of instruction, especially in cotton and woolen manufacturing.

Many of the American schools show the influence of European example, and the modifications and improvements have been notable. Manual training has long been in general use in European schools, but the manual training high school is a distinct American type. The New York Trade School, too, has no European prototype, though the institution was established after careful study of foreign experience. No European school offers short trade courses of so distinctly practical a character. Doubtless the influence of the trade unions would be too strongly against courses so short. England has no trade schools in the sense of schools of apprenticeship. The so-called continuation school, so common in Germany for many years, represents a kind of instruction the need of which seems to be much felt just at present. The success of the Young Men's Christian Association classes and the rapid growth of the correspondence schools seem to be proof of this. Instruction of this character has been carried on by several notable schools for many years—for example, Spring Garden Institute, of Philadelphia and the General Society of Mechanics and Tradesmen, of New York.

The fact must not be overlooked that the mode of educational organization in European countries differs radically from that in the United States. In several continental countries, for example, a complete system of industrial education, from the kindergarten and manual training up through trade and technical schools to the higher engineering and scientific institutions, is established by law and subsidized and administered by the State. With us, on the contrary, there is not only no such complete system, but there are, with the exception of a few recently established schools, no schools of an industrial character receiving governmental aid. Where public manual training schools

have been established the work has been done by municipal boards or by private enterprise. Hence there is no uniform system of manual training, nor does any one of the manual training schools have any relation to any trade or technical school.

In spite of this there are several incorporated manual training schools in the United States, and a number of public manual training high schools of the same character, which surpass anything of the kind to be found abroad. In these something more is taught than the use of mere hand tools. Machine tools for wood and metal work abound, and the colossal mechanical appliances for testing the strength of materials, etc., seen in some of the schools, dwarf into insignificance the relatively meager equipment of the foreign schools of this class.

In respect to trade and technical schools of the best class the conditions are, with a few exceptions, quite the reverse. The thoroughness of their courses is proverbial, and the specialization of their training comprehends the minutest details. The German *Fachschule*, where a single specialty is taught—upholstering, for example—turns out at the end of the course a thoroughly competent workman. The dyer who learns his art in the Crefeld laboratories is versed in all the subtle chemistry of colors, and from his knowledge of the composition of fabrics understands to the fraction of a pfennig the cost of dyeing a given number of yards blue or yellow.

A like thoroughness characterizes the instruction given in the horological schools at Besançon, Geneva, and Coventry—great centers of the watchmaking industry. It is a marked feature, also, of the trade schools of tailoring, dressmaking, and artificial flower making in France, Belgium, and Switzerland; of the Austrian wood-carving and cabinetmaking schools; of the German schools for locksmiths and horseshoers; and even of the fishing schools of the Scandinavian peninsula.

A few of the trade and technical schools of the United States take rank with their European prototypes, and the number is yearly increasing. Of these the New York Trade School, the Williamson and the San Francisco trade schools, Drexel and Pratt institutes, and the textile schools are examples. But the most of our schools of this class are inferior, in respect to the fullness and completeness of their teaching, to the foreign models. Of many, it is true, it may be said that the courses are as thorough and as long as the circumstances of the persons for whom they are arranged will permit. The schools must develop both supply and demand side by side.

In considering the subject of the present status of industrial education, no attempt was made in the report to take a census of the various institutions in this and other countries in which trade and technical instruction in any form constitutes a feature. The number of institutions equipped for such training was not considered to be a matter

of great consequence. It was rather the organization and methods of representative schools that had progressed beyond the experimental stage that formed the basis of the inquiry. The chief object, therefore, was to draw from original and other sources the facts which should most clearly show the actual progress that has been made in trade and technical schools and their influence upon industry and the individual.

In looking for the beginnings of education of an industrial character in the United States, attention must be directed to the early efforts of the institutes of technology. These schools, to be sure, are primarily schools of science and engineering of collegiate grade, but their contribution to the extraordinary industrial progress of the past quarter of a century, both directly and through their influence upon scientific instruction in the colleges of the country, has been very large. Although the earliest of these schools, Rensselaer Polytechnic Institute, was established in 1824, the period of their real activity began immediately following the close of the civil war. The Massachusetts Institute of Technology opened its doors in 1865, and was followed in 1868 by the Worcester Polytechnic Institute, in 1866 by Lehigh University, and in 1871 by the Stevens Institute of Technology. Since then many other institutions of like character have been established, and the attendance of students pursuing scientific and engineering courses of this grade has grown to large proportions.

Scientific education received a decided impetus in the passage of the land-grant act of July 2, 1862. The colleges of agriculture and the mechanic arts in the several States, numbering about 60, founded from time to time under this act or complying with its terms, have received from the General Government under this act in the aggregate more than \$16,000,000. These institutions have applied themselves to a great extent to the promotion of agricultural education. In several instances, however, the benefit of the grant has gone to institutions almost exclusively scientific or technological, while in many cases courses of such a character were established side by side with the agricultural courses. In most cases the industrial results of the work of these schools, except in the agricultural courses, have been, as in the institutes of technology, indirect rather than strictly industrial.

The agricultural tendency of these schools was given a fresh impetus by the act of March 2, 1887, by which the sum of \$15,000 per annum went to each State for the establishment and maintenance of agricultural experiment stations connected with the colleges founded under the land-grant act. Further governmental support was given the work of these schools by the act of August 30, 1890, under which \$15,000 was voted to each State, this sum to be increased by \$1,000 each year for ten years, after which the annual aid was fixed at

\$25,000. The act stipulated that this money should "be applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural, and economic science, with special reference to their applications in the industries of life."

These institutions have in recent years greatly extended their work, not only in agricultural but, in the South, in industrial lines. The dairy courses established in Wisconsin, Minnesota, and Iowa in 1891 and later in a number of other States have proved remarkably successful. Short winter courses in agriculture for the farmers have been a recent development, and the correspondence courses for farmers, a successful experiment initiated by the agricultural department of Cornell University, is the latest.

Some of the agricultural colleges now offer instruction professedly of an industrial character and not of a grade leading to a degree. In the colored Agricultural and Mechanical College, Greensboro, N. C., which will serve as the example for a number in the South, there are three departments—department of agriculture and chemistry, department of mechanical engineering and architecture, and department of mechanics. In the department of mechanics the leading mechanical trades are taught in four-year courses. During the first two years of the course the time is largely devoted to shopwork at the chosen trade, supplemented by drawing, elementary mathematics, and science. In the last two years advanced work at the trade follows, with general shop training and instruction in advanced mathematics and science. Similar courses are offered in a number of the southern institutions.

Another southern institution, Clemson College, in South Carolina, added a textile department in 1898 and erected a building and equipped it with a full line of cotton-mill machinery for illustrating the manufacture of yarns and woven fabrics of all descriptions. Courses in carding, spinning, weaving, dyeing, designing, etc., are offered. A similar department was established in 1899 at the North Carolina College of Agriculture and Mechanical Arts and in 1900 at the Mississippi Agricultural and Mechanical College.

A number of schools of art had long existed and some instruction in industrial drawing and design had been given in connection with the art courses.

No schools of an industrial character or even with instruction of an industrial tendency, other than the classes of schools already mentioned, were in existence up to 1870. That year was notable as marking the introduction of industrial drawing into the schools of Massachusetts. The exhibit of the work in drawing of the Boston public schools and of the Massachusetts Normal Art School at the Centennial in 1876 attracted wide attention to the advantages of such training. The work

of the pupils of the Russian schools in metal and of the Swiss schools in wood (shells) at the same time drew the attention of educators to the educational possibilities of manual training.

The extension of drawing in the public schools has steadily gone on since that time, so that it is now a generally required study in the larger towns and cities of the country. In 1890 the Massachusetts State board of education reported that industrial drawing was taught in the public schools in 201 out of the 351 cities and towns of the State. According to the law enacted in 1898 every Massachusetts town and city must give instruction in drawing in its public schools, and any town or city may, and every town and city of 10,000 or more inhabitants must, maintain evening schools for the instruction of persons over 14 years of age in industrial drawing, both free-hand and mechanical (among other studies).

Manual training followed close upon drawing in its extension in the public schools. As early as 1870 instruction in sewing was obligatory in every public girls' school in Boston. Manual training in the form of typesetting was offered to the boys and girls of the Jamestown, N. Y., public schools in 1874 as an experiment. The Centennial exhibits of foreign work, as has been said, attracted marked attention to the possibilities of manual training, and sporadic experiments followed in a number of cities. Progress at first was slow. Difficulties were experienced in raising funds, securing equipment, providing places for instruction, etc.; but the work went steadily forward. Wherever the experiment was tried the training soon became a part of the public school instruction. In 1890, according to the Report of the Commissioner of Education for 1899-1900, manual training was offered in the public schools in 37 cities and towns of 8,000 population or over. In 1894 this number had increased to 95; in 1896 the number was 121, and in 1900 the total number was 169. Massachusetts now requires that "every town and city of 20,000 or more inhabitants shall maintain as part of both its elementary and its high school system the teaching of manual training."

The character and extent of the manual training offered in the public schools of the country are diverse. In many places only the simple exercises in drawing, woodworking, and sewing are introduced as electives in the grammar grades. In other schools one or all of these exercises are required of all the pupils; in other places much more complex courses have gradually been worked out; while in other places still, in the larger cities, the manual-training high school has been added, where alongside the literature, mathematics, and science of the ordinary high school course four years' manual practice is given in drawing, carpentry, wood turning, pattern making, cabinetwork, foundry work, forging, machine-shop work, etc. The public schools

can not, as a rule, carry manual training much beyond the elementary exercises of drawing, woodworking, sewing, and cooking in the grammar grades. The expense of equipment and cost of maintenance forbid the further extension of the instruction, at least outside the larger cities.

At the same time with the movement for industrial drawing and manual training in the public schools in Massachusetts arose a desire for more adequate provision for training in industrial design. The Lowell School of Practical Design, as a result, was established in 1872 for instruction in textile design. In Philadelphia the School of Industrial Art followed in 1877; in Providence the Rhode Island School of Design in 1878, and within more recent years a large number of others.

An outgrowth of the Philadelphia school, and associated with it as a department, is the Textile School. This school was opened in 1884, and was one of the earliest American trade schools, and is still one of the best. It is notable as the earliest attempt to promote the interests of a manufacturing industry by means of industrial teaching, whether by State or individual support. The school was established and equipped by the manufacturers of Philadelphia, but the State of Pennsylvania has contributed liberally toward its support. So successful has been the work of the school that similar schools have recently been opened at Lowell, New Bedford, and Fall River, Mass., Atlanta, Ga., Raleigh, N. C., Clemson College, S. C., and in Mississippi.

In trade education for the building and mechanical trades the New York Trade School was the pioneer, in 1881. Since then many schools have adopted its methods in a few courses in conjunction with their other work, but it still stands as the only school of its kind. The Williamson Free School of Mechanical Trades, opened in 1891 near Philadelphia, represents different methods—a four years' course of theoretical and scientific instruction in connection with four years' manual work in the school shops. San Francisco has two schools of the same type—one for the building trades and one for the mechanical trades. The success of all these schools has been marked from the first.

In the South industrial training for the colored race has taken a special development. The slender resources of the schools and pupils, the ignorance of the people, and the needs of a country undeveloped industrially altogether presented a peculiar problem. Hampton Institute, the pioneer school of the class, opened in 1868, attempted to solve the problem by teaching trades to the colored pupils. The pupils are allowed to pay a portion of the expenses of their schooling by working in the school shop and on the farm. The result has been from the first remarkably successful. A large number of schools

employing the same methods have been established all over the South. The most notable of these is the school at Tuskegee, Ala., which has over 1,000 pupils.

Among the oldest schools giving instruction for the benefit either of industry or the workmen are those schools where drawing, mathematics, physics, etc., are taught to workmen in evening classes. In this country they have frequently been referred to as technical schools, and sometimes as continuation schools, from their likeness to the German continuation schools. Although one of the oldest types, the appreciation of the need of such instruction on the part of workman and employer has within a few years given education of this class new life. Spring Garden Institute, Philadelphia, and the School of the General Society of Mechanics and Tradesmen, New York, the School of Hoe & Co., and the Newark Technical School are examples of the older schools. Drexel Institute and the Rochester Athenæum are notable examples of recent progress on these lines. In this connection (for their aim is to give instruction of the same character to pupils of the same class) should be mentioned the industrial evening classes of the Young Men's Christian Association and the correspondence school classes. In the former about 6,000 pupils are in attendance and in the latter schools an enrollment of more than 300,000 pupils is claimed.

As will be seen from what has been said, no complete system of industrial schools exists either in the United States or in any State. The progress has been made in the way of independent growth, for no coordination exists between the different classes of schools. Manual training has for the most part grown up in the public schools, but even where it has had the encouragement of State law, as in Massachusetts, or of State aid, as in New Jersey, each local board has controlled the direction and method of growth. The same is true of drawing, the basis of all industrial training. Trade, technical, and technological schools have been almost entirely the result of private initiative and support. The exceptions relate to textile trade schools which have had State and municipal aid and to those technological schools that are departments of State universities or of agricultural and mechanical colleges. The agricultural and mechanical colleges have all had the aid of the Federal Government to a generous extent. Many, too, in their positions as State institutions, have had the financial support of the State governments. But each institution is independent of any other as to courses and methods of instruction and as to all matters of administration. The only coordination is such as has resulted from the influence of successful example and of voluntary cooperation.

With such a history and with such lack of any complete uniform system of industrial schools the difficulty of any exact classification of schools will be readily understood. Any classification that might be

made would be arbitrary and open to criticism. The classification that was adopted for the report had for its aim the bringing together of schools of the same general purposes and character. It was thought that a clearer idea could thus be gained of what has been accomplished along the different lines followed by the various schools. A description of typical individual schools was given, arranged in the following classes:

Trade schools, including schools for teaching building and mechanical trades, barbering, brewing, dairying, domestic science, dress-making, tailoring, millinery, textile manufacture, watchmaking, and several miscellaneous trades; technical and continuation schools; Young Men's Christian Association industrial classes; correspondence schools; schools of industrial drawing and design; industrial schools in the South for the colored race, and industrial schools in the South for the whites.

As already explained, only trade schools, technical schools, and schools of industrial drawing and design as above enumerated were described in the report. This excluded from consideration the several important classes of manual training schools, agricultural colleges (except such as have trade courses), and institutes of technology, and all courses of instruction leading to a degree.

In formulating plans for the preparation of an exhibit illustrating this subject it was at once realized that both the nature and scope of the exhibits must necessarily be adapted to the character and amount of the space which would be available for the purpose. After careful consideration of these factors it was determined to limit the exhibits to photographs illustrating the housing, equipment, and work of a limited number of typical schools in the United States. Had space been available, much interesting material, such as specimens of the work of students in various schools, might have been gathered, and a larger number of institutions might have been included. The schools from which exhibits were secured, and to whose officers is due the acknowledgment of much assistance and many courtesies in the way of furnishing material for exhibit, are as follows:

Schools from which exhibits were secured.

Building and mechanical trade schools:

New York Trade School, New York, N. Y.

Pratt Institute, Brooklyn, N. Y.

St. George's Evening Trade School, New York, N. Y.

Williamson Free School of Mechanical Trades, Williamson School, Pa.

California School of Mechanical Arts, San Francisco, Cal.

Wilmerding School of Industrial Arts, San Francisco, Cal.

Dairy schools:

Dairy School, University of Wisconsin, Madison, Wis.

Department of Dairying, Iowa State College of Agriculture and Mechanic Arts, Ames, Iowa.

Schools of dressmaking, millinery, domestic training, etc.:

Young Women's Christian Association School, Boston, Mass.

Young Women's Christian Association School, New York, N. Y.

Women's Training School (Young Women's Christian Association), St. Louis, Mo.

Textile schools:

Pennsylvania Museum and School of Industrial Art, Philadelphia, Pa.

Lowell Textile School, Lowell, Mass.

New Bedford Textile School, New Bedford, Mass.

Technical and continuation school: Rochester Athenæum and Mechanics' Institute
Rochester, N. Y.

Colored industrial schools:

Armstrong and Slater Memorial Trade School, Hampton Normal and Agricultural Institute, Hampton, Va.

Mount Meigs Colored Industrial Institute, Waugh, Ala.

Snowhill Industrial Institute, Snowhill, Ala.

Tuskegee Normal and Industrial Institute, Tuskegee, Ala.

As may be seen from the above statement, material from 19 typical schools was included in the exhibit. These schools represent 6 distinct classes of institutions engaged in trade and industrial education. As previously stated, the exhibits relating to the subject were necessarily limited to photographs, of which a total of nearly 400 are shown. These furnish a comprehensive view of the character of the work of these schools and their facilities for carrying out the purposes for which they were severally instituted. It is to be regretted that only a limited selection of these can be reproduced in connection with this description. The effort has been made, however, without discrimination, to select such as gave the best idea of the character of the valuable work carried on by the schools under each general class. A brief description of the purpose and system of instruction of each school, drawn largely from their catalogues and other publications, is presented.

BUILDING AND MECHANICAL TRADE SCHOOLS.

In this country schools for the teaching of the building trades and other mechanical trades are those which usually suggest themselves when trade schools are spoken of, and the New York Trade School is the best known school of the type. In this school the various building trades are chiefly taught, although classes in blacksmithing and printing have been under training. The method used employs not only manual practice, but instruction in the scientific principles on which such practice is based. In the day classes four consecutive months are required to complete the course. For evening classes a much longer time is necessary. Schools of this class vary considerably in their scope and methods, as will be seen on an examination of their courses of study.

Another type of schools of this class is represented by the Williamson Free School of Mechanical Trades. In this school the course goes

beyond the principles of the trade operations and is designed to give such academic instruction as will lay a good foundation in the physical sciences, mathematics, and mechanical drawing. This corresponds to a large extent with the academic part of the course in the manual-training high schools. The aim in the shorter trade courses is to train the pupil to make a good journeyman at the trade; in the other not only to prepare for the trade, but to lay such a broad foundation as will assure future promotion above the grade of journeyman. Two other schools which represent the most advanced experience in this direction are the California School of Mechanical Arts and the Wilmerding School of Industrial Arts, both at San Francisco.

Nearly all the industrial schools scattered throughout the South give instruction in these trades. These are fully described by themselves.

In connection with this class of schools attention should be called to the apprenticeship system in use in the machine shops of the Baldwin Locomotive Works and the Brown & Sharpe Company. In both these shops the apprentices are required, in addition to their shopwork, to take up a course of technical studies in evening schools. The shopwork of these apprentices, unlike that in the schools, is paid productive work, differing from other productive work in the same shops only in that the apprentices are in charge of a special instructor and that they are retained at each operation only long enough to thoroughly learn it. In either establishment the number of apprentices is sufficiently large to bear comparison with the largest of the trade schools, and in the Baldwin Works more than a thousand apprentices are receiving the benefits of the training.

NEW YORK TRADE SCHOOL, NEW YORK, NEW YORK.

This school is the largest and most thoroughly equipped exclusively trade school in the country. It was founded in 1881 by the late Col. Richard T. Auchmuty to provide instruction for young men in certain trades and to afford young men already in those trades the opportunity to acquire additional skill and knowledge.

The system of instruction, which was originated by the founder, is what is known as the "Auchmuty system." At first the student is put on work that is simple, but as skill and a workmanlike use of the tools are acquired he is advanced to work that is more difficult and complicated until he is made familiar with the various branches of his trade. The work given the student is of a thoroughly practical character, such as will be met with in actual practice at the trade. The scientific instruction imparts knowledge of the trade that is of the highest value, and is given by means of carefully prepared lectures, manuals, diagrams, and experiments. Mechanics of skill and long experience act as instructors, and each student receives individual care and attention.

The school is located on First avenue, Sixty-seventh and Sixty-eighth streets, and covers a plot of ground measuring 200 feet on the avenue, 325 feet on Sixty-seventh street, and 113 feet on Sixty-eighth street. The main entrance is on First avenue.

The charges for tuition in the day classes range from \$25 per term for the course in sign painting to \$35 for the course in carpentry and \$40 each for the courses in bricklaying, cornice work, electrical work, house painting, plumbing, and steam and hot-water fitting. In the evening classes the charges are as follows: Drawing, \$6 per term; blacksmithing, cornice work, fresco and sign painting, \$12 each; plumbing, printing, and steam and hot-water fitting, \$14 each; bricklaying, carpentry, electrical work, house painting, and plastering, \$16 each.

In the course in steam and hot-water fitting an attendance of three consecutive months in the day school, or two consecutive terms of six months each in the night school, is necessary to qualify for a certificate. In the other branches the pupils in the day schools are required to complete four consecutive months, and those in the night school three terms of six months each.

The school is under the general management of a board of trustees. The 28 instructors are practical mechanics, and a few are trade school graduates also. The courses of instruction and the number of pupils in each class during the session of 1901 were as follows:

<i>Day classes.</i>		<i>Evening classes.</i>	
Plumbing.....	118	Plumbing.....	166
Carpentry.....	22	Carpentry.....	21
Electrical work.....	38	Electrical work.....	54
Bricklaying.....	17	Bricklaying.....	32
Sign painting.....	3	Plastering.....	9
House and fresco painting.....	8	Blacksmiths' work.....	19
Sheet-metal and cornice work.....	4	Sheet-metal and cornice work.....	38
Steam and hot-water fitting.....	13	Steam and hot-water fitting.....	19
		House painting.....	12
		Fresco painting.....	31
		Sign painting.....	17
		Printing.....	16
		Drawing.....	14
Total.....	223	Total.....	448

Since the school was established about 9,000 pupils have been enrolled in the different classes, and of this number about 3,000 have received certificates of proficiency.

The land, buildings, and equipment, which to the present time have cost \$300,000, were provided by the founder, Col. Richard T. Auchmuty. The school is supported by tuition fees and an income from an endowment fund provided by the founder. The cost of maintenance during the year 1899-1900 was \$33,000.



PLATE 168—SCHOOL BUILDINGS



PLATE 169—INSTRUCTION IN PATTERN MAKING
NEW YORK TRADE SCHOOL

100

101

102

103

104



PLATE 170—INSTRUCTION IN BLACKSMITHING



PLATE 171—INSTRUCTION IN PLUMBING

NEW YORK TRADE SCHOOL

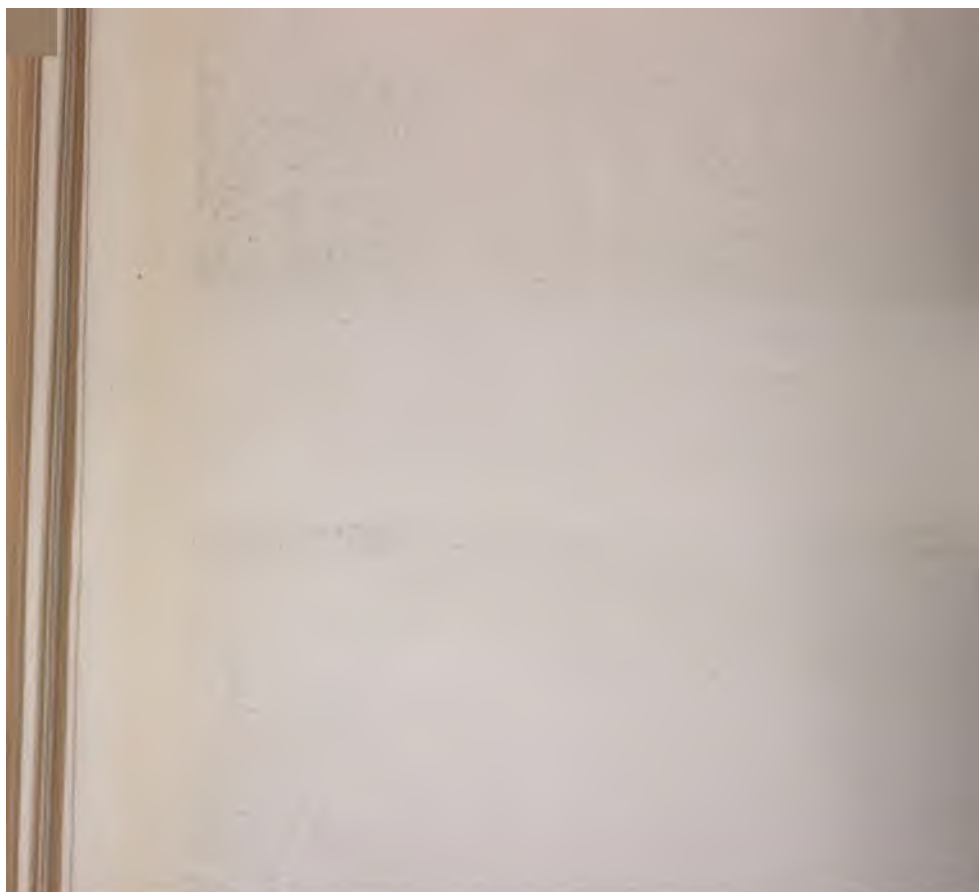




PLATE 172—INSTRUCTION IN TYPESETTING



PLATE 173—INSTRUCTION IN FRESCO PAINTING

NEW YORK TRADE SCHOOL

According to a statement furnished by the officials in charge of the school the building-trades industry in Greater New York and vicinity has derived great benefit from the work of this school.

It is claimed, also, that the school has helped to raise the standard of intelligence and efficiency among the working classes generally, and has tended to promote industrial, educational, and social development. There has been some opposition from labor unions, on the ground that trade schools generally create an oversupply of labor. It is claimed that this contention is wrong and can not be supported by facts. The school aims to give its pupils such preliminary knowledge and training as is necessary to enable them to become first-class workmen, and the master mechanics and builders state that the number of first-class mechanics never equals the demand.

So far as the graduates are concerned, because of their careful training in the school they are preferred by employers over merely shop-trained apprentices and workmen. After having had a reasonable amount of practical experience in the trades they have no difficulty in obtaining steady employment, in some instances at higher wages than the ordinary mechanics. The trade school graduate can not take up the practical work in his trade without first undergoing a period of apprenticeship. Experience, facility, and speed of execution are essential in a thorough mechanic. These qualities can not be secured in a trade school, but must be acquired outside at real work.

PRATT INSTITUTE, BROOKLYN, NEW YORK.

Pratt Institute, Brooklyn, was established in 1887, after several years' careful investigation of existing schools both in this country and in Europe on the part of the founder, the late Charles Pratt.

The object of the institute, as stated in its catalogue, is: To promote manual and industrial education, as well as cultivation in science, literature and art; to inculcate habits of industry and thrift; to foster all that makes for right living and good citizenship, and to aid those who are willing to help themselves. It seeks to provide facilities by which persons wishing to engage in mechanical, scientific, artistic, educational, domestic, commercial, or allied employments may lay the foundation of a thorough knowledge, theoretical and practical, or perfect themselves in those occupations in which they are already engaged.

In accordance with these principles, the work of the institute is prosecuted upon several lines, with four distinct aims in view:

1. Educational, pure and simple, the purpose being the harmonious development of the faculties, as in the work of the high school.
2. Normal, the ultimate aim being the preparation of the student to become a teacher. Normal training is at present given in the department of fine arts, in the department of domestic science, and in the department of kindergartens.

3. Technical, or special training to secure practical skill in the various branches of the fine, industrial, and domestic arts, the handicrafts, the applied sciences, and the mechanical trades.

4. Supplementary and special, intended for the benefit of those who wish to supplement the training of school or college by attention to special subjects conducing to more intelligent direction of domestic, financial, social, or philanthropical interests.

The institute occupies six buildings. The main building is 100 feet by 86 feet, and six stories high. The high school building, completed January 1, 1892, is 48 feet by 81 feet, and is four stories high. The trade school building, recently erected, is 32 feet by 110 feet, and four stories high. It contains large and well-equipped steam and electrical laboratories, as well as workrooms for the trade classes. The gymnasium building is 100 feet by 95 feet, and contains floor space for work, finely appointed bath and locker rooms, and a large swimming tank.

The charges for tuition range as follows:

Art department: Full-day classes, \$15 per term; half-day classes, \$10 to \$12. Evening classes, \$5 per term for each course.

Department of domestic art: Day classes, sewing, drafting, and costume design, \$15 per term; dressmaking and millinery, \$25; art needlework, \$5 to \$10; basketry, \$5. Evening classes, sewing and basketry, \$2; dressmaking, \$5 to \$10; drafting, \$10; millinery, \$5.

Department of science and technology: Day classes, \$15 per term. In the evening classes the fee for the technical courses is \$15 each for six months, except the courses in steam and the steam engine and strength of materials, which are \$8 each per term. The fee in the trade courses is \$15 each for six months' tuition.

Under the present plan of organization the work of the institute is divided among the following departments: High school, fine arts, domestic art, domestic science, science and technology, kindergartens, libraries, and physical training.

In the high-school department there is a four-year course, which is intended as a course of general education. More than two-fifths of the entire time during the course is devoted to advanced manual training.

The object of the art school is to provide thorough and systematic instruction in the fine and decorative arts. The various divisions in the day school are as follows: Regular art course, which requires four years, and two-year courses in modeling, practical design, architectural drawing, art metal work, and wood carving.

There are also evening classes in general free-hand drawing, composition, cast drawing, life drawing, architectural drawing, decorative and applied design, clay and wax modeling, art metal work, and wood carving, which pursue lines of work similar to those of the day classes, but necessarily abridged.



PLATE 174—MAIN SCHOOL BUILDING



PLATE 175—SCIENCE AND TECHNOLOGY BUILDING AND ELECTRICAL BUILDING

PRATT INSTITUTE





PLATE 176—INSTRUCTION IN APPLIED ELECTRICITY



PLATE 177—INSTRUCTION IN MACHINE WORK—EVENING CLASS

PRATT INSTITUTE





PLATE 178—INSTRUCTION IN WOOD CARVING AND MODELING



PLATE 179—PRECIOUS-METAL WORK FROM ORIGINAL DESIGNS

PRATT INSTITUTE





PLATE 180—INSTRUCTION IN DRESSMAKING



PLATE 181—INSTRUCTION IN COSTUME DESIGNING



PLATE 182—INSTRUCTION IN MILLINERY

PRATT INSTITUTE

In the department of domestic art there are courses in sewing, dress-making, millinery, costume design, art needlework, and basketry. All these courses are technical in their purpose and are intended to fit young women for different positions in the trades. The evening courses in this department include sewing, dressmaking, and millinery. The purpose of the department of domestic science is to afford training in subjects which pertain to life in the home, and includes the following courses: Normal course for teachers; general course, including bacteriology, home nursing and hygiene, plain cookery, household economics, laundry work, technical courses in cookery for nurses and housekeepers, and a serving course for waitresses. The evening courses embrace cookery for housekeepers, nurses, and cooks, a serving course for waitresses, and laundry work.

The department of science and technology takes in all the courses especially fitted for men. The following interesting statement regarding the general character of these courses, together with a brief sketch of their development and the need for such instruction, was kindly furnished by the director of this department:

The courses are divided into three classes, with somewhat distinct aims and objects for each. First, the day school provides technical courses in mechanical and electrical work which cover a period of two years; second, evening technical courses in physics, chemistry, applied electricity, mechanical drawing and machine design, steam and the steam engine, and strength of materials; and, third, evening trade classes in carpentry, pattern making, machine work, mechanical drawing, plumbing, sign painting, and fresco painting. While the evening courses from their name appear to be scientific rather than technical, yet, as conducted by the institute, they really come under the latter division, as they are intended for young men who are engaged in practical work during the day, but who do not understand the theoretical principles pertaining to the same. Thus, for young men who are employed in chemical manufacturing concerns and in other places where the knowledge of chemistry is absolutely essential to success the course in chemistry is made as practical and technical as possible, applying directly to the needs of such men. The classes are made up almost entirely of this type of students. The evening trade classes are intended for young men who are engaged in the trades during the day, either as apprentices, helpers, or journeymen, and who wish to gain further knowledge, experience, and skill in order to get ahead.

The institute is under the control of a board of trustees, with a secretary as executive officer, and a faculty composed of 7 members, each one of whom is the director of a separate department. Altogether there are 128 instructors, of whom 75 are engaged in the departments considered here. Most of the instructors are graduates of colleges or scientific schools, and many of the technical instructors were educated in the institute. In the trade work the instructors are men who have

and the prominence in their several trades and are, for the most part, self-sufficient and were trained in the institute.

The number of students enrolled in the departments herein enumerated during the year 1900-1901 was as follows:

STUDENTS ENROLLED IN SELECTED DEPARTMENTS OF PRATT INSTITUTE, 1900-1901.

Department.	Day courses.	Evening courses.	Total.
Science and technology	283	220	503
Domestic science	464	72	536
Artistic and mechanical drawing	117	346	463
Total	864	638	1,502

Of these 1,502 students in the normal and children's classes.

Of these 1,502 students in the children's classes and those who take instruction for home use.

In the day course in the department of science and technology the several branches are combined. In the evening course each subject may be, and usually is, taken separately. Of the 346 pupils in the evening courses the following is the number in each class:

<i>Evening technical.</i>		<i>Evening trade.</i>	
Physics	24	Carpentry	28
Chemistry	48	Machine work	44
Applied electricity	25	Plumbing	54
Mechanical drawing and mechanical design	59	Sign painting	16
Steam and steam engine	21	Fresco painting	11
Strength of materials	18	Total	151
Total	195		

The department of domestic science is made up almost wholly of normal students, children, and those who take instruction for home use. There were 310 students in this department.

The cost of the buildings, grounds, and equipment of the institute is approximately \$1,200,000. Everything was provided for by an endowment fund given for the purpose by the founder, and this fund has been added to by the trustees of the Pratt estate. At the present time the fund amounts to \$2,500,000. Approximately \$250,000 annually is required for the maintenance of the work of the institute.

The following statement regarding the evening trade class in machine work conveys some idea as to the local influence in one particular line: For this class, which is limited to 50 students, there were at the opening session last year 200 machinists who were anxious to be admitted, simply because they were aware of the benefit that the instruction had been to others in their trade, and more than 100 of those who could not be accepted wished their names placed on the waiting list for next year.

In the early history of the institute there was some opposition from one of the local labor unions, which arose from a misconception of its purpose and was not well founded. During the past ten years the Journeymen Plumbers' Association of Brooklyn has cooperated in the direction of the class in plumbing and awards certificates to those showing satisfactory proficiency, which entitle the holders to admission to the association. The Master Painters' Association cooperates with the evening classes in sign and fresco painting in a similar way, and grants certificates, to those showing proficiency, at the completion of the course.

ST. GEORGE'S EVENING TRADE SCHOOL, NEW YORK, NEW YORK.

This school was established in New York City in the fall of 1892, and by its useful career has firmly established itself as a valuable adjunct of St. George's Protestant Episcopal Church.

Started primarily as a boys' club, to bind the boys together, amuse them, and keep them from the streets in the evening, it has now become a salient factor in their lives, enabling them to select the lines of work for which their characters and dispositions are best adapted, and to become eventually skilled mechanics. The school, with its evening classes, allows not only the boys who go to the public schools to attend, but also the young men who work during the day in stores and offices. Theoretical instruction in the form of short lectures is given each evening in the class rooms on subjects which, bearing directly upon the work in hand, tend to open the eyes of the pupils to facts closely related to their studies and acquaint them with the rapid strides being made outside the school in their special line of work.

In addition to the benefits derived from the school, there is an employment bureau, which is conducted for the purpose of finding positions for the boys which will enable them to work during the day at the trades they are being taught in the evening, thereby insuring a livelier interest in the work as well as more lasting impressions derived from it. The church also conducts a manual training school for boys under 10 years of age, from which a large proportion of the pupils in the trade school are drawn.

Tuition is free. All pupils must be members of St. George's Sunday School and over 10 years of age.

The course of instruction covers a period of three years, and embraces carpentry, plumbing, printing, and free-hand and mechanical drawing.

The general management is vested in a board of directors chosen by the church. There are 6 instructors, of whom 1 is a college graduate, and the others are men who have received a practical training in the

trades. The number of pupils in each department and class during the year 1900-1901 was as follows:

PUPILS IN EACH DEPARTMENT OF ST. GEORGE'S EVENING TRADE SCHOOL, 1900-1901.

Department.	First-year class.	Second-year class.	Third-year class.	Total.
Carpentry.....	40	20	20	80
Plumbing.....	24	20	16	60
Printing.....	25	20	15	60
Free-hand and mechanical drawing.....	30	30	20	80
Total.....	119	90	71	280

The present school building is located at 505 East Sixteenth street, and was occupied for the first time in the fall of 1900. It is a four-story brick structure with about 8,000 square feet of floor space, and together with the equipment cost about \$8,000.

The school does not claim to turn out skilled mechanics. The main object is to train the pupils so that when they leave the school they can take up positions as apprentices or helpers in the several trades with the prospect that the knowledge they have already acquired will enable them to make rapid advancement.

WILLIAMSON FREE SCHOOL OF MECHANICAL TRADES, PENNSYLVANIA.

A somewhat different type of school from any of the foregoing is the Williamson Free School of Mechanical Trades, founded by the late Isaiah V. Williamson, a merchant of Philadelphia, and located at Williamson School, Delaware County, Pa., about 16 miles from Philadelphia. The course is considerably longer and much more academic work is required. The pupil during the course of three years is bound by articles of apprenticeship. In his endowment deed of trust, dated December 1, 1888, the founder states his motives and intentions:

I am convinced that the abandonment or disuse of the good old custom of apprenticeship to trades has resulted in many young men growing up in idleness, which leads to vice and crime and is fraught with great danger to society. For nearly thirty years I have carefully considered this subject, with the intention at the proper time of founding and endowing a free institution, to be located in the city of Philadelphia or its vicinity, where, subject to the control of proper managers and under the direction and supervision of skillful and expert instructors, poor and deserving boys could be gratuitously instructed in the rudiments of a good English education and, what is of equal if not greater importance, trained to habits of industry and economy and taught such mechanical trades or handicrafts as may be suited to their capacities, so that when they arrive at manhood they may be able to support themselves decently by the labor of their own hands and become useful and respected members of society, as I am well convinced that in this country any able-bodied young man of industrious and economical habits who has learned a good mechanical trade can not only earn a good living and acquire an independence, but also become a useful and respected citizen.



PLATE 183—ADMINISTRATION BUILDING AND CAMPUS



PLATE 184—INSTRUCTION IN CARPENTRY

WILLIAMSON FREE SCHOOL OF MECHANICAL TRADES

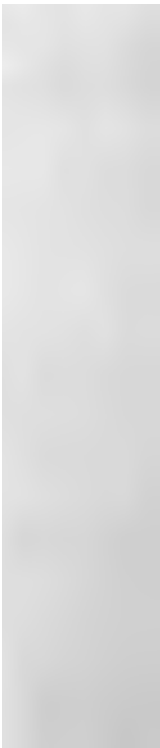




PLATE 185—INSTRUCTION IN MACHINE WORK



PLATE 186—SCHOOL BARN ERECTED BY STUDENTS
WILLIAMSON FREE SCHOOL OF MECHANICAL TRADES



I request that the trustees shall at all times bear in mind the fact that the main object I have in view is to train young men to mechanical trades, so that they may earn their own living, and that while the acquisition of any branch of an English education which may be of aid to them in their several trades is necessary and important, any higher or advanced knowledge which might render them dissatisfied with or unfit for their employments is unnecessary and may be disadvantageous. I expressly direct that each and every scholar shall be compelled to learn and be thoroughly instructed in one good mechanical trade, so that when they leave the school on the completion of their indentures they may be able to support themselves by the labor of their own hands. I especially direct that the scholars shall be taught to speak the truth at all times, and that they shall be trained to habits of frugality, economy, and industry, as above all others the one great lesson which I desire to have impressed upon every scholar and inmate of the school is that in this country every able-bodied, healthy young man who has learned a good mechanical trade and is truthful, honest, frugal, temperate, and industrious is certain to succeed in life and to become a useful and respected member of society.

The par value of the securities transferred by the deed was \$1,596,000, having an appraised value at the then market price of \$2,119,250, and producing at that time an income approximating \$100,000. A suitable site was selected, and the first buildings were completed and ready for occupancy on October 20, 1891.

The benefits of the school are entirely free, no charge being made for board, clothing, or instruction. Applicants must not be under 16 nor over 18 years of age; they must be able-bodied, healthy, of good moral character, and possessed of natural aptitude and liking for mechanical work. The scholastic examination for admission includes reading, writing, spelling, arithmetic, including fractions, weights and measures, and interest, geography, United States history, composition and language. Other things being equal, preference in admission is made in the following order: Those born in the city of Philadelphia; those born in Bucks County, Pa.; those born in Montgomery and Delaware counties, Pa.; those born elsewhere in Pennsylvania; those born in New Jersey; those born elsewhere in the United States.

Each pupil is given a preparatory course in woodworking and mechanical drawing in connection with studies in the schoolroom and extending through six months. At the end of that period pupils are placed at one of the following five trades, the selection of which is made by the trustees, due regard being given to the adaptability of the pupils to the trades to which they are assigned:

Carpentering; pattern and cabinet making; bricklaying, including range, furnace, and boiler setting, etc.; machine trade in all its usual details; steam and electrical engineering, steam fitting, etc.

Each pupil takes but one of the trades named, and his instruction in mechanical and free-hand drawing tends in the general direction of his trade.

The branches taught in the academic department are reading, writing, arithmetic, algebra, geometry, physical and political geography, history, physical science, English literature, physiology and hygiene, civil government, chemistry, elementary vocal music, theory of the steam engine, strength of materials, and building construction.

The school and shops are in session eight hours daily on five days of the week and four hours on Saturday, each pupil spending about four hours in the class rooms and four hours in the shops daily the first year, the proportion spent in the shops gradually increasing toward the close of the apprenticeship.

The domestic life of the school conforms, as far as is practicable, to good family government. To that end the pupils are divided into families of twenty-four, each having its matron and its own distinct home or cottage, cared for by its occupants. The homes contain no kitchens, dining rooms, or laundries, these being located in other buildings.

The school is under the general management of a board of trustees. The faculty consists of a president, a superintendent, and ten instructors. The instructors in the mechanical department are practical workmen with expert knowledge of their respective trades. The number of pupils in each trade and grade during the year of the report was as follows:

PUPILS IN EACH COURSE AT WILLIAMSON FREE SCHOOL OF MECHANICAL TRADES.

Course.	Grade.			Total.
	First year.	Second year.	Third year.	
Carpentry.....	19	11	4	34
Pattern and cabinet making.....	17	15	6	38
Bricklaying, etc.....	21	7	8	36
Machine trade.....	29	19	12	60
Steam and electrical engineering, steam fitting, etc.....		8	1	9
Total.....	86	60	28	174

Since the school was opened there have been upward of 670 pupils in attendance, and of this number 328 have received certificates of graduation.

The school grounds cover an area of 200 acres. There are twenty-two buildings in all, most of them of very substantial construction of stone and brick.

THE CALIFORNIA SCHOOL OF MECHANICAL ARTS, SAN FRANCISCO,
CALIFORNIA.

This school is the outcome of the generous public spirit of James Lick, who provided for the founding and endowment, at a cost of \$540,000, of an institution to be called the California School of Mechanical Arts, the object of which should be to educate males and females



PLATE 187—SCHOOL BUILDINGS



PLATE 188—INSTRUCTION IN MACHINE WORK

CALIFORNIA SCHOOL OF MECHANICAL ARTS





PLATE 189—INSTRUCTION IN COOKING



PLATE 190—INSTRUCTION IN SEWING

CALIFORNIA SCHOOL OF MECHANICAL ARTS

III

III

II

III



in the practical arts of life, such as working in iron, wood, and stone, or any of the metals, and in whatever industry intelligent mechanical skill now is or can hereafter be applied. Such institution was to be open to all youths born in California. The trust named a board of trustees and provided for its perpetuation.

The execution of this particular portion of the trust was delayed by prolonged litigation, and it was not until January 3, 1895, that the buildings were completed and the school formally established.

The school is open free of tuition to any boy or girl of the State of California who has completed the eighth grade of the grammar schools, upon the following conditions: Applicants are admitted upon satisfactory recommendation from their former teachers, principals, or school superintendents.

It is the plan of the school to begin with a preliminary manual training course, and when the student has nearly completed it to allow him to select one of thirteen mechanical and industrial arts, in order that he may devote to his chosen field of work his entire time for two years, making the full course four years in all. The preliminary course does not end abruptly at the end of the second year, but merges into the apprentice course for about six months. At the beginning of the third year any student who has completed the preliminary course satisfactorily may elect one of the trades or technical courses and pursue therein a formal apprenticeship for two years, leading to a diploma of graduation; or he is offered the privilege of attending the third year with a view to receiving a certificate for the completion of the preliminary course. A great variety of trades are included in these courses, besides one course designed as preparatory for a technical college course.

The opening of the Wilmerding School has been a decided benefit to the California School, because the latter had been compelled to extend its efforts over a very wide field of instruction in order to meet the needs of its large clientage. The Wilmerding School includes in its curriculum a long list of building trades, and as it is the policy of the California School to expand along the lines of machinery trades the field of building trades is left to the Wilmerding School. In accordance with this plan the apprentice courses in carpentering, wood carving, and industrial modeling have been discontinued, and students desiring these courses are instructed in the Wilmerding School. Students in the Wilmerding School who desire instruction along lines not provided for in that school are received and instructed in the California School. While the two schools are controlled by separate and distinct boards and their maintenance is derived from entirely different sources, yet they are under the direct supervision of the same principal. It is therefore easy to adjust this interchange of work, and it has proved not only feasible but advantageous to both institutions.

The school is under the control of a self-perpetuating board of trustees, originally named by the founder.

The faculty consists of 15 instructors. In the academic department all of the instructors are college graduates. The shop instructors are men who were holding responsible positions—foremen as a rule—in large manufactories when selected for positions in the school; they are all thorough masters of their respective trades.

The total enrollment for both sexes in all grades from the opening of the institution, including the school year ending in 1902, was 2,301. The enrollment for the single year 1901-2 was 372, distributed as shown below:

PUPILS ENROLLED AT THE CALIFORNIA SCHOOL OF MECHANICAL ARTS, 1901-2.

	First preliminary.	Second preliminary.	Junior apprentice.	Senior apprentice.	Un-graded.	Visitors.	Total.
Boys.....	99	38	32	20	85	10	284
Girls.....	33	16	14	6	18	1	88
Total.....	132	54	46	26	103	11	372

There are two main buildings—the academic building and the shops. The academic building is 71 by 123 feet and three stories high. This building contains recitation rooms, physical and chemical laboratories, and the domestic department. The shop building consists of a two-story portion 40 by 107 feet, and a one-story portion 50 by 155 feet, besides an additional cupola shed 10 by 13 feet. There is also a third building of corrugated iron over wooden structure, which surrounds the brass furnaces, core oven, and terra cotta kiln.

The school is supported by the income from its original endowment. For the year ending June 30, 1900, the earnings of the endowment fund were \$26,638.28, and the disbursements from these earnings for the same period were \$26,232.27. Of the disbursements \$18,747.11 went to pay salaries and other current expenses and \$7,485.16 went for taxes. In November, 1900, the State constitution was amended by a vote of the people so as to exempt the property of the school from taxation. Besides the amount received from the endowment fund, each student pays \$10 per year to cover expenses of materials, and a small revenue, about \$2,500 per year, is derived from the sale of articles manufactured in the school.

The graduates of the school are accepted by local manufacturers as fourth-year apprentices, or "improvers," and at the end of one year they are rated as full-fledged journeymen. Employers seem to prefer that the school give an additional rating and recommendation to each graduate rather than to attempt to lay down any general rating for all. Under this arrangement some of the graduates receive journeymen's pay from the beginning, while others still are rated as journeymen but work for a time at slightly lower wages than are allowed journeymen.



PLATE 191—SCHOOL BUILDING



PLATE 192—INSTRUCTION IN CABINETMAKING

WILMERDING SCHOOL OF INDUSTRIAL ARTS



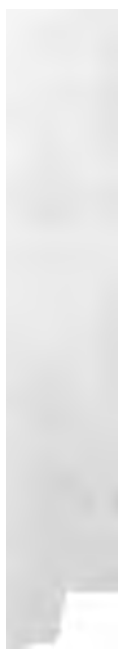


PLATE 193—INSTRUCTION IN WOOD CARVING



PLATE 194—INSTRUCTION IN PLUMBING

WILMERDING SCHOOL OF INDUSTRIAL ARTS



THE WILMERDING SCHOOL OF INDUSTRIAL ARTS, SAN FRANCISCO, CALIFORNIA.

The object of the Wilmerding School is to teach trades to boys. It was established through the generosity of the late J. C. Wilmerding, and opened in 1899. Mr. Wilmerding bequeathed to the regents of the University of California the sum of \$400,000 "to establish and maintain a school, to be called 'The Wilmerding School of Industrial Arts,' to teach boys trades, fitting them to make a living with their hands, with little study and plenty of work."

The courses of study and instruction cover the building trades, such as carpentry, cabinetmaking, bricklaying, blacksmithing, plumbing, wood carving, clay modeling, and architecture. While the main work of the school is manual training in these trades, the pupil receives also the drawing and mathematics required by a first-class workman, such training in English and business forms as will enable him to transact his business properly, such portions of geography and history as are most intimately associated with the development of mechanical arts, and such knowledge of the history and principles of our Government as a good citizen should possess. In short, it is intended that the graduates of the school shall be well-instructed workmen in the trades which they select, and intelligent citizens. The equipment of tools, machinery, and appliances is very complete. All the shops are equipped with the best of everything in this line and arranged according to the latest shop methods. The course is designed to cover four years. There is no charge for tuition, the use of tools, instruments, or materials. Any boy who has been graduated from the eighth grade of a grammar school will be admitted to any department of this school. Boys who have finished only the seventh grade will also be admitted, provided they are over 16 years of age.

The school in 1901 had enrolled but two classes, together numbering 165. The faculty consists of 12 instructors. Those in the academic departments are all college graduates, and the shop instructors are men who are thorough masters of their respective trades. The annual cost of maintenance is \$21,500, and is provided from the earnings of the original endowment.

DAIRY SCHOOLS.

Dairy schools for instruction, both scientific and practical, in the care of milk and the manufacture of butter and cheese have long been in operation in several foreign countries. The first American school of this class was opened at Madison, Wis., in 1891, in connection with the agricultural college of the University of Wisconsin. It was established with the belief that a school in which butter and cheese making could be taught would be of great value to the dairy industry, and

consequently greatly benefit the farmers. There was also felt to be a scarcity of trained men to take charge of creameries and cheese factories. While it was possible for a young man to learn the business in a factory, it was realized that to reach the best results he must have both scientific and practical training.

Iowa and Minnesota quickly followed Wisconsin in the establishment of these schools, both States making appropriations for the purpose in the same year. Other schools followed, and the rapid growth of the movement is indicated by the fact that in 1899-1900, according to the Report of the Commissioner of Education, there were over 1,300 students in attendance in 30 schools, all connected with the colleges of agriculture and mechanic arts.

The dairying industry has been greatly enlarged and improved as a result of the establishment of these schools. The schools have enabled the numerous creameries and cheese factories to get men trained in all that makes a strictly first-class dairyman. Besides this, they have been the means of increasing the general intelligence of the class of farmers which is most concerned in the growth and perfection of the industry. The Wisconsin school has been instrumental in giving larger application to the Babcock test, and this test has revolutionized the dairy business. It is used everywhere in the United States and in many foreign countries. It has been estimated that it saves to the Wisconsin farmers alone more than three-quarters of a million dollars annually. The test was invented by Prof. S. M. Babcock, of the Wisconsin school, and given to the dairying world free from patents that it might be within the reach of everyone who might be benefited by its use.

DAIRY SCHOOL, UNIVERSITY OF WISCONSIN, MADISON, WISCONSIN.

This school is a department of the Wisconsin Agricultural College, which is a part of the State University. It was opened in 1891 as the first school of its kind in this country, and has been taken as a model in other States.

The school is under the management of the president and 5 regents of the university. The corps of instructors consists of 8 professors and 11 instructors in practice. The enrollment for the term 1900-1901 was 120 in all grades.

No entrance examination is required. Students must be at least 16 years of age and have a common school education. Everyone who takes the full dairy course must have had at least four months' experience in a creamery or cheese factory. There is a short course adapted to the needs of those who wish only to become dairy farmers, and an advanced course, the aim of which is to prepare the student for the duties of instructor in dairying or to assume responsible positions in advanced dairy lines. The university operates a creamery and cheese factory, and also a pasteurizing plant in connection with the dairy



PLATE 195—DAIRY BUILDING



PLATE 196—DAIRY BARN

DAIRY SCHOOL, UNIVERSITY OF WISCONSIN





PLATE 197—INSTRUCTION IN DAIRY MACHINERY

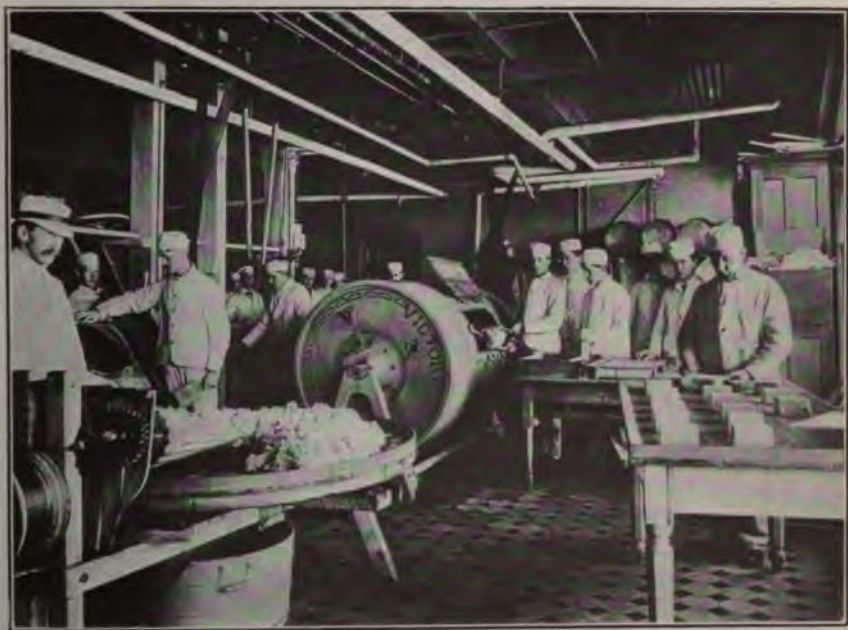


PLATE 198—INSTRUCTION IN CREAMERY BUTTER MAKING

DAIRY SCHOOL, UNIVERSITY OF WISCONSIN





PLATE 199—INSTRUCTION IN FARM DAIRY BUTTER MAKING



PLATE 200—INSTRUCTION IN CHEDDAR CHEESE MAKING

DAIRY SCHOOL, UNIVERSITY OF WISCONSIN



school. The advanced course of instruction is comprehensive and thorough and covers every detail in butter making and cheese making.

To secure a dairy certificate the candidate must have spent a full term in the school and passed a satisfactory examination in all the subcourses. A standing below 60 per cent in any one examination makes the student ineligible to a dairy certificate. Further, he must have worked in a creamery or cheese factory for two seasons of not less than seven months each. One of these seasons must follow the period spent in school, and during this time the candidate must have practical charge of the factory in which he is working. He will report the operations of his factory monthly, or as often as directed, on proper blanks furnished by the university. The university holds the right to send an authorized person to inspect the factory of the candidate, and no certificate will be issued if an unfavorable report is made by the inspector. If all of the conditions are satisfactorily complied with the candidate will receive a dairy certificate. Owing to the expense of inspection, the university does not agree to grant certificates to students operating factories in other States.

Residents of the State of Wisconsin taking the dairy course pay fees amounting to \$10. Those living in other States pay \$45. For instruction and practice in the shop, an additional fee of \$5 is charged all students. An additional fee is charged for special and advanced laboratory work in bacteriology.

DEPARTMENT OF DAIRYING, IOWA STATE COLLEGE OF AGRICULTURE AND MECHANIC ARTS, AMES, IOWA.

This school is a department of the State College of Agriculture and Mechanic Arts. It is the result of an appropriation by the State in 1891, made for the establishment of a dairy school.

The facilities are adequate for teaching dairying in a thoroughly practical and scientific manner. The dairy building is well equipped for practical work as well as scientific instruction and investigation. It is more than a dairy building as the term is generally understood. It is a practical working creamery and cheese factory, in operation every week day in the year. During the summer season from 15,000 to 25,000 pounds of milk are taken in daily and manufactured into butter and cheese; during the winter somewhat less. The student becomes familiar with everything connected with the management of a commercial creamery, and meets every problem that is likely to confront him in his future work.

The courses in dairying were established for the benefit of those who are already engaged in the business, either on the farm or in the creamery or factory, and for this reason a very large portion of the time is devoted to practical work in the dairy building.

The school is under the general management of a board of trustees. There are 7 instructors. The school building was erected and equipped by the State in 1891, and cost altogether \$25,000. The school is nearly self-supporting from fees and from the profits arising from the creamery and cheese factory operated by the faculty and students. When these sources fail to afford sufficient funds, the State supplies the deficiency.

The annual enrollment in all grades is 120. Many of the students take only one of the shorter courses. The dairy school provides a four-week course for butter makers and cheese makers, beginning the second week in January; two sixteen-week courses, one beginning with the regular college year in September, the other with the second college term in February; and a one-year course. The first is only for experienced butter and cheese makers. The other courses are open to all.

SCHOOLS OF DRESSMAKING, MILLINERY, DOMESTIC TRAINING, ETC.

Education in the trades of dressmaking, millinery, domestic training, etc., is given in a large variety of schools. Many city public schools give some instruction in sewing and cooking to all girl pupils. The Young Women's Christian Association classes in many of the cities have long been doing notable work of this character. The Boston association began its instruction for domestic servants in 1888, and later added the trade courses in dressmaking and millinery. The Women's Educational and Industrial Union of Boston was also a pioneer in the same class of instruction.

Instruction of a more ambitious character in the same subjects is found in Pratt Institute, Drexel Institute, and Armour Institute. The courses there are longer, and consequently can be made more thorough. The training given in these schools, especially in Pratt Institute, has had a great influence upon the work of other schools, many of their graduates having become instructors elsewhere.

Another class of schools doing useful work on these lines is the industrial schools for the colored race in the South. White schools in the South giving instruction of like character are fewer in number and their work is of less importance industrially.

The schools for teaching dress cutting and dressmaking conducted under private auspices form another type. They furnish instruction to large numbers, particularly in various systems of dress cutting. They are business enterprises conducted for gain. Their pupils are made up in large part of women who learn cutting and fitting in order to do their own dressmaking.

YOUNG WOMEN'S CHRISTIAN ASSOCIATION SCHOOL, BOSTON,
MASSACHUSETTS.

The special need leading to the establishment of the training school for domestics was the lack of properly trained house servants. For years the association had maintained an employment bureau, and the incompetence of the majority of those who asked for work resulted in the establishment of this school in 1888. This incompetence results from many causes, ignorance being one, and the fact that there is apparently a stigma cast upon the work of house service itself. The cause of this is not alone the fault of the employees, but belongs at least equally to the employing class, who often treat their servants as menials and inferiors and allow them little freedom or independence.

This side of the difficulty can not be cured by the school. The problem must be approached from the side of the housekeeper. This the association attempts to do by training the housekeeper in its school of domestic science and Christian work, a school outside the scope of this investigation.

The courses of dressmaking and millinery really form part of the association's school of domestic science, whose object it is to give scientific and practical instruction in all that pertains to the home and its management, as well as to fit young women to teach domestic science and arts in schools, institutions, and homes; to be Christian workers in associations, settlements, and slums, and to be matrons, housekeepers, and houseworkers. The difficulty of obtaining a systematic and thorough training in dressmaking and millinery in the shops has, however, led many to take these courses with only the end in view of fitting themselves to be competent and capable dressmakers and milliners. In the shops the first object in view is to use the girl so as to get the most possible out of her; that is, she is kept doing those things for which she seems to show the most aptitude, and no effort is made to teach her the whole trade. It is claimed by the management of the association that its school furnishes complete training in dressmaking and millinery and fits those taking these courses for the practice of the trades.

For admission to the school of domestics good character is the first qualification, and testimonials must be presented. Pupils can be admitted only upon an agreement signed by themselves or their guardians that they will remain at least six months, and if they leave before the expiration of this period they are to be charged at the rate of \$2 per week from the time of admission to that of leaving. If, however, they complete the course of six months the instruction, including board and tuition, is entirely free, the applicant being expected only to furnish a suitable outfit and to enter on a week's probation. No girl is admitted under the age of 16 years. The

course includes cooking and sewing, general housework, chamber work, parlor work, laundry work, home nursing, sewing and mending, reading and spelling, penmanship and letter writing, arithmetic and geography, and daily scripture lessons.

In the school for domestics there are 3 instructors, all graduates of the school of domestic science, and 1 a college graduate. There is 1 instructor in dressmaking and 1 in millinery.

During the school year 1899-1900 there were 20 pupils in the school for domestics, 12 in the dressmaking class, and 10 in the class in millinery. Up to the end of the school year there had been 1,100 graduates from the school of domestics, 150 from the class in dressmaking, and 120 from the millinery class.

The approximate annual cost of maintaining the school for domestics is \$2,000, of the dressmaking course \$300, and of the millinery course \$225. The funds are obtained from contributions, legacies, annual subscriptions, personal gifts, and fees paid by certain classes.

YOUNG WOMEN'S CHRISTIAN ASSOCIATION SCHOOL, NEW YORK,
NEW YORK.

The Young Women's Christian Association of New York City was founded February 10, 1870. During the earlier part of its career the educational work of the association was largely confined to the commercial branches, and very little interest was manifested in industrial education until the fall of 1886. Since that time, however, the industrial branches have continued to grow in importance, until now they overshadow all the other branches combined. In addition to the regular class work, the association conducts an employment bureau, and needlework and order departments. Many of the graduates have procured positions through the agency of the bureau.

The classes are open only to women studying for the purpose of self-support. Pupils are admitted to the sewing and cooking classes at the age of 15. In the class for trained attendants no pupil is admitted under 20 or over 40 years of age, except by special agreement. In the other classes applicants must be between the ages of 18 and 35, and not connected with other schools. Satisfactory references are invariably required.

The charges for tuition are as follows: Hand and machine sewing, \$2 to \$4; dressmaking, \$5 to \$12; millinery, \$5 to \$7; feather curling, \$2.50; embroidery, \$7 to \$9; cooking, \$3 to \$5; free-hand and mechanical drawing, \$15; instrumental drawing, \$15; drawing in water colors, designing, etc., \$9 each; course for trained attendants, \$10.

The school year opens October 1 and continues until the 1st of June. Day and evening sessions are held. The curriculum includes thorough instruction in every detail of hand and machine sewing, dressmaking, millinery, art embroidery, feather curling, cooking, invalid cooking,



PLATE 201—INSTRUCTION IN COOKING



PLATE 202—INSTRUCTION IN LAUNDRY WORK

YOUNG WOMEN'S CHRISTIAN ASSOCIATION SCHOOL, BOSTON, MASSACHUSETTS





PLATE 203—INSTRUCTION IN NURSING



PLATE 204—INSTRUCTION IN MILLINERY

YOUNG WOMEN'S CHRISTIAN ASSOCIATION SCHOOL, NEW YORK, NEW YORK

TEXTILE SCHOOLS.

Textile schools in this country owe their beginning to the Philadelphia Textile Association. The manufacturers of textiles were aware of the work of the foreign textile schools, and became convinced that with such schools in this country competent designers and textile experts could be trained and that the highest grades of goods could be made here as well as in any foreign mill. As a result, a textile department was added to the Pennsylvania Museum and School of Industrial Art in 1884. The school was successful from the start. It has gained the approval and generous support of the manufacturers of textiles and of textile machinery. The State and city have given it generous financial aid, the appropriation for the latest year being \$17,500 from the former and \$10,000 from the latter. Free scholarships are granted in return.

Nothing more was done for textile education until 1895 (if we except the important work in design of the Lowell School of Practical Design in Boston, which was founded in 1872). In that year the textile interests of Massachusetts secured the passage of an act authorizing the establishment of textile schools in cities with 450,000 spindles or over, and granting State aid to the extent of \$25,000 in case the municipality appropriated an equal amount. This act was applicable to Lowell, Lawrence, Fall River, and New Bedford.

The first school created under the act was the Lowell Textile School, opened in January, 1897. New Bedford followed with a school devoted especially to cottons, in October, 1899, and action was taken for a school in Fall River in 1900. This is now called the Bradford Durfee Textile School of Fall River. All these schools have received aid from the State, the amounts voted in 1901 being: For Lowell, \$35,000 for a building, the amount to be duplicated from the city or other sources, and \$18,000 for the year's expenses on condition that \$7,000 be raised by the city or from other sources; for New Bedford, \$18,000, on condition that \$7,000 be raised by the city or from other sources; for Fall River, \$35,000 for a building, the amount to be duplicated from the city or other sources. A condition that has been made in all these schools is that regular day students who are nonresidents of the State must pay a yearly tuition of not less than \$150.

In the South several schools have introduced textile courses with encouraging results. These are Clemson College, South Carolina, in 1898; the North Carolina College of Agriculture and Mechanical Arts, in 1899, and the Mississippi Agricultural and Mechanical College, in 1900. A more detailed description of some of the schools is given in the following pages.

PHILADELPHIA TEXTILE SCHOOL AND SCHOOL OF INDUSTRIAL ART,
PHILADELPHIA, PENNSYLVANIA.

The Pennsylvania Museum and School of Industrial Art owes its origin to the increased interest in art and art education awakened by the Centennial Exhibition in Philadelphia in 1876. It was incorporated February 26, 1876, for the purpose of establishing "for the use of Pennsylvania, in the city of Philadelphia, a museum of art in its branches and technical applications, and with a special view to the development of the art industries of the State, to provide instruction in drawing, painting, modeling, designing, etc., through practical schools, special libraries, lectures, and otherwise."

The school was opened during the winter of 1877-78, and up to 1884 the work of the classes was confined to general courses in drawing, painting, and modeling, with constant regard to the needs of the industries, but without attempting to provide instruction in any particular occupation.

Under the present organization schools are in active operation in applied art (drawing, applied design, woodwork and carving, decorative painting, illustration, decorative sculpture, and architectural design), in normal instruction, in modern languages, and in textile design and manufacture. In the latter school instruction is given in fabric structure and design, weaving, color harmony and figured design, chemistry and dyeing, wool carding and spinning, worsted drawing and spinning, cotton carding and spinning, and finishing. In addition to these there is a department of worsted-yarn manufacture in process of development.

In consideration of an annual appropriation to the school by the legislature of Pennsylvania each county in the State is entitled to at least one free scholarship in any department of the school for the full course of three years. Counties sending more than one senator to the legislature are entitled to as many scholarships as there are senatorial districts. These appointments are made by the governor of the State, usually on the recommendation of members of the State legislature. In addition to the above there are seventeen free scholarships, which are offered to pupils in the public schools of Philadelphia. The school year opens the latter part of September and closes the first week in June. Day and evening sessions are held.

Applicants for admission are expected to have an ordinary grammar school education, in addition to which a good knowledge of free-hand drawing is desirable for admission to the textile school, though this is not insisted upon. The work of each school is arranged so as to admit of special courses of one or two years' duration. The regular courses require three years for completion.

The tuition fees in the day school are \$150 per year of thirty-six weeks for all courses except the ingrain-carpet course, which is \$75. There are also additional laboratory charges of from \$3 to \$5 per year.

In the evening school the fees are \$25 per year for the course in general analysis and technical chemistry and \$15 for either one of the other courses.

The institution is managed by a board of trustees and an associate committee of women. A part of the trustees are elected by the members of the corporation and a part appointed by the State legislature and by the city government. There are 36 instructors, a considerable number of whom have been trained in the school. The instructors are always chosen for their experience in practical work in connection with the industries for which the school is intended to be a preparation. The number of pupils during 1900-1901 was as follows:

ATTENDANCE IN TEXTILE SCHOOL AND SCHOOL OF APPLIED ART OF THE PENNSYLVANIA MUSEUM, 1900-1901.

Department.	First-year class.	Second-year class.	Third-year class.	Total.
DAY SCHOOL.				
Applied art	274	74	34	382
Textile design and manufacture	65	30	13	108
EVENING SCHOOL.				
Applied art	206	31	25	262
Textile design and manufacture	122	36	21	179
Total	667	171	93	931

The funds for erecting the buildings, which, together with the equipment, are estimated to be worth \$1,200,000, were provided by subscriptions, gifts, and bequests from public-spirited citizens, manufacturers, and business men of Philadelphia and vicinity. A considerable portion of the equipment was purchased and donated outright by textile manufacturers. The revenue of the school is derived from an annual appropriation of \$17,500 by the State legislature, an annual appropriation of \$10,000 by the city of Philadelphia, income from endowments, and tuition fees. The cost of maintenance, including interest on mortgaged property, is about \$65,000 per annum.

LOWELL TEXTILE SCHOOL, LOWELL, MASSACHUSETTS.

This school was incorporated "for the purpose of establishing and maintaining a textile school for instruction in the theory and practical art of textile and kindred branches of industry." The incorporators were representatives of the great textile corporations of Lowell, Lawrence, and vicinity, whose aggregate capital is over \$65,000,000. By the terms of the by-laws at least three-fourths of the trustees must be

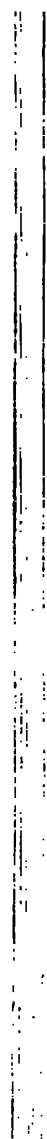


PLATE 205—SCHOOL BUILDING



PLATE 206—EXPERIMENTAL DYEING LABORATORY

PENNSYLVANIA MUSEUM AND SCHOOL OF INDUSTRIAL ART



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PLATE 207—HEAVY LOOM WEAVING



PLATE 208—EXPERIMENTAL WEAVING—HAND LOOMS

PENNSYLVANIA MUSEUM AND SCHOOL OF INDUSTRIAL ART

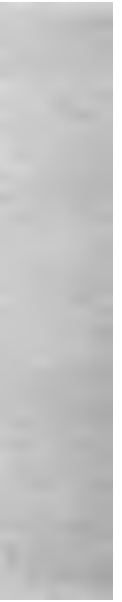




PLATE 209—INSTRUCTION IN CARD STAMPING AND LACING
PENNSYLVANIA MUSEUM AND SCHOOL OF INDUSTRIAL ART



"persons actually engaged in or connected with textile or kindred manufactures."

The school was formally opened January 30, 1897, and instruction was begun February 1, 1897.

There are 18 instructors in the school.

The equipment of the school consists of high-grade machinery, with all latest improvements, specially built to afford facilities for all kinds of experimental work, and of such variety as is never found in any one textile mill. The value of this equipment is \$100,000, but fully \$80,000 worth of it has been donated to the school.

The day classes are especially intended for the instruction of those whose intention it is to enter the business of textile manufacturing in any branch. The courses are sufficiently complete to enable a person to start without any previous acquaintance with textiles, but at the same time those who have been engaged in such business and wish to improve their knowledge and opportunities can devote their entire time to study most profitably.

The student has the option of selecting any one of five regular or several special courses. Each course is intended to cover three years. One term of preliminary instruction is common to all courses. At the end of this term each student is required to select which of the courses he is to follow in his subsequent studies, and the instruction is specialized to suit each course. The five regular diploma courses are cotton manufacturing; wool manufacturing; designing, general course; chemistry and dyeing; weaving.

Candidates for admission to the day classes are required to pass an examination in arithmetic, English, geography, and algebra, or present evidence of proper qualification.

The fee for the day course is \$100 per year for residents of Massachusetts; for nonresidents it is \$150 per year. Special students pay, in general, the full fee, but if a course be taken involving attendance at the school during a limited time application may be made to the principal for a reduction.

The diploma of the school is awarded upon the satisfactory completion of either of the five regular courses, covering not less than three years, except where entrance is to advance standing. In such cases at least one year's residence will be required. For the satisfactory completion of a three years' course in any special department the certificate of the school will be awarded; it is possible to complete such a course in less than three years if the candidate be passed to advanced standing, but at least one year's attendance will be required.

The evening classes of the school are intended to give thorough instruction to those who are engaged during the day in mills and workshops, to enable those who wish it to perfect their knowledge of the

branches in which they work, to acquire knowledge of other processes than those in which they are regularly engaged, and in the course of several winters to complete a thorough technical education without interfering with their daily duties.

The courses are: Cotton spinning, a three-year course; woolen spinning, a one-year course; worsted spinning, a two-year course; designing, a three-year course; chemistry and dyeing, a three-year course; weaving, a three-year course; mechanical engineering, a two-year course; also a course in warp preparation of one term. For the satisfactory completion of either of these courses the certificate of the school will be awarded; the diploma of the school will be awarded in exchange for certificates of satisfactory completion of those subjects which go to make up any one of the several regular diploma courses.

The courses of instruction offered in the evening are identical with those of the day, with the exception that less time is devoted to the machine work, since in most cases this is of small moment. Ordinarily the handling of the machinery is a part familiar to most of the students through contact with it in the daytime, and in such cases the explanations and calculations are of greater importance. The requirements for admission to the evening classes are similar to those for the day.

The evening courses are free to graduates of the evening high and drawing schools, operatives of the mills and machine shops, and other residents of Lowell. The fees in the evening classes are much lower than in the day classes. They are as follows: Cotton, woolen, or worsted spinning, fee for all except residents of Lowell, \$2.50 per term or \$5 per year; designing, or chemistry and dyeing, fee for all except residents of Lowell, \$5 per term or \$10 per year; warp preparation, weaving, or mechanical engineering, fee for all except residents of Lowell, \$2.50 per term.

During the school year of 1901-2 there were registered in the school students as follows: Day students: First-year students, 38; second-year students, 17; third-year students, 10; art students, 7, and special students, 10; a total of 82. These students were divided among the courses as follows: Cotton manufacturing, 22; wool manufacturing, 17; designing, 9; chemistry and dyeing, 12; weaving, 5; art course, 7, and special courses, 10; a total of 82. Evening students: First-year students, 278; second-year students, 61; third-year students, 18; a total of 357. From these are to be deducted 8 students who were taking two courses, making a true total of 349. These students were divided among the courses as follows: Cotton spinning, 48; woolen and worsted spinning, 63; designing, 81; chemistry and dyeing, 67; weaving, 50, and mechanical engineering, 52; a total of 362. From these are to be deducted 13 students who were taking two courses, making a true total of 349. The day students, 82, and



PLATE 210—SCHOOL BUILDINGS



PLATE 211—DYEING LABORATORY

LOWELL TEXTILE SCHOOL





PLATE 212—COTTON-SPINNING DEPARTMENT

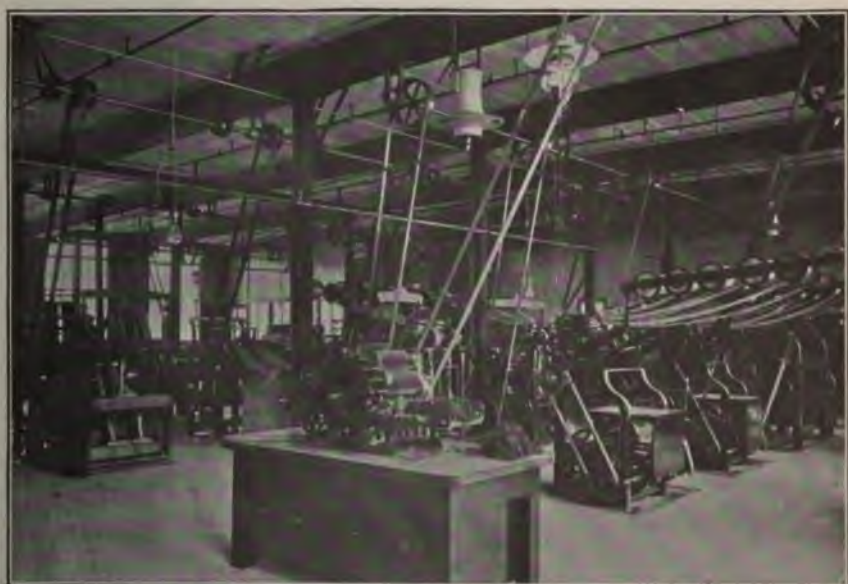


PLATE 213—WOOLEN AND WORSTED SPINNING DEPARTMENT

LOWELL TEXTILE SCHOOL

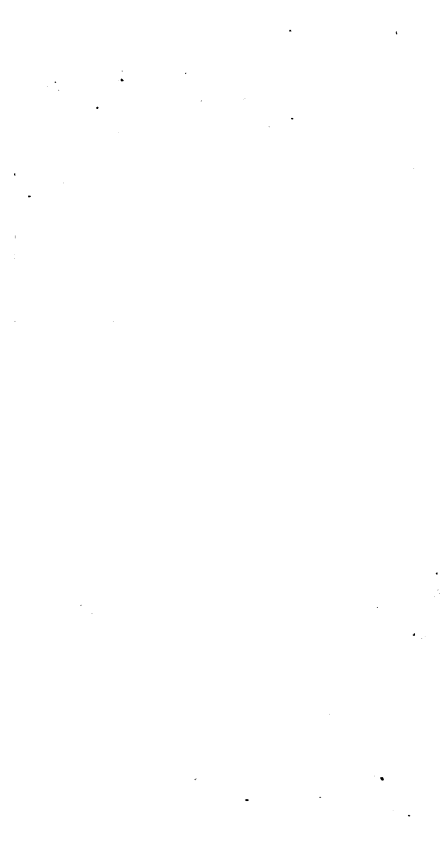


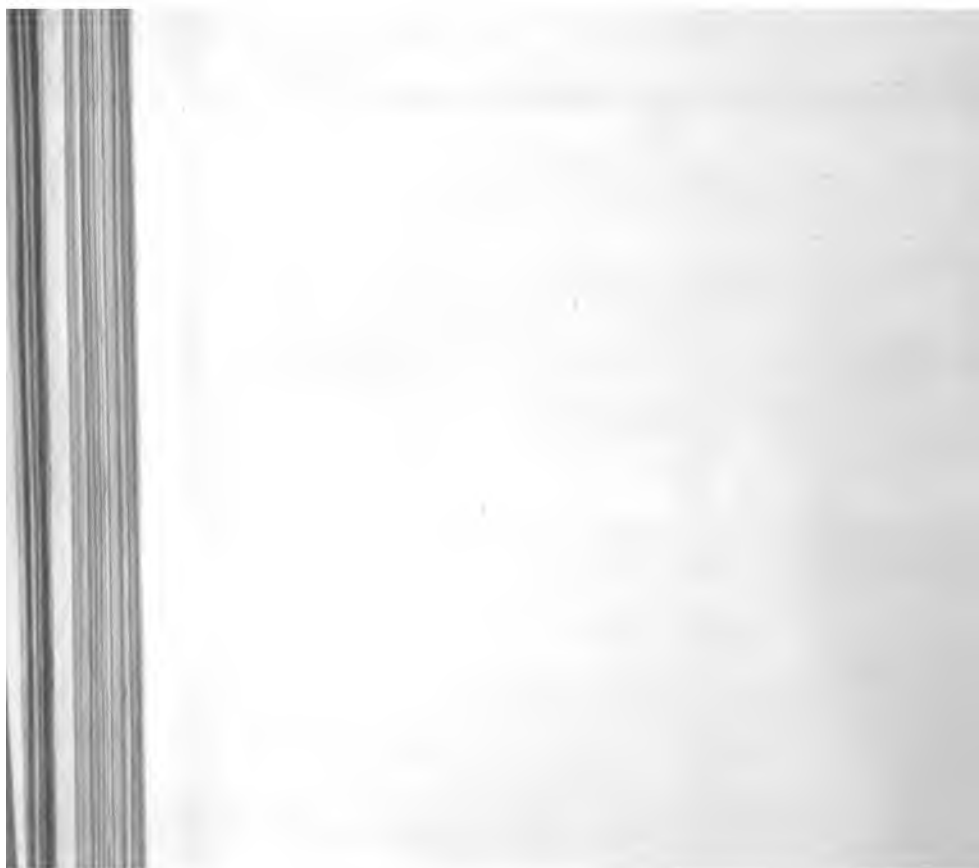


PLATE 214—HAND LOOMS



PLATE 215—CARPET LOOMS

LOWELL TEXTILE SCHOOL



the evening students, 349, make a total of 431, but 7 students are members both of the day and evening classes and should be deducted, which leaves a true total of 424 students in the school at the date this information was secured.

NEW BEDFORD TEXTILE SCHOOL, NEW BEDFORD, MASSACHUSETTS.

The conditions and causes which led to the establishment of this school were substantially the same as those already explained in the case of the Lowell school. Advantage was taken of the act of 1895, providing for State aid for textile schools, and a corporation was organized, consisting of many of the leading manufacturers of New Bedford and other cities, secretaries of the labor unions of New Bedford, and several of its prominent citizens.

The school was opened for instruction October 14, 1899. The total value of the building and equipment is about \$75,000. Money appropriated by the State and city built and equipped the building. Much of the machinery was given or loaned to the school by the manufacturers. The annual cost of maintenance is about \$18,000, which is met by State and city appropriations and fees.

The school has a wide variety of cotton-mill machinery, almost every maker of cotton machinery in the United States being represented, together with several English builders, giving the student an opportunity to become acquainted with machines varied in construction, although utilized for performing the same work.

The courses of instruction are divided into day classes and evening classes, and the courses are shown below:

Day classes: The principal course of instruction in the school is the general cotton manufacturing course, which is intended to give a student a general knowledge of all the cotton manufacturing processes and to qualify him to hold a position as superintendent of a cotton spinning and weaving mill or other responsible position. The course covers two years.

It has been found that there is a demand for optional courses, and the following five alternate courses have been arranged: No. 2, yarn mill superintendent's course, one year; No. 3, weave mill superintendent's course, one year; No. 4, designer's course, two years; No. 5, mill engineer's course, two years; No. 6, dry goods commission house course, one year.

The fee for tuition in the day classes is \$50 per term of approximately four months, making \$100 for the school year for residents of Massachusetts. The fee for those outside the State is \$75 per term, or \$150 per year, in accordance with an act of the legislature.

No difference is made between the instruction of the evening and that of the day courses. The same machinery and same instructors are retained for the evening classes, and, in order to accommodate

the larger number of students generally found in the evening technical schools, additional instructors have been engaged for the benefit of the evening students alone. Practically free education in any or all branches of cotton manufacturing is offered to those who can not defray the whole cost of their textile education.

The fees for the evening classes are uniformly \$2.50 per term of three months in each subject. Students taking two subjects and attending four evenings per week pay \$5 per term. In a few subjects instruction is given free to residents of New Bedford.

TECHNICAL AND CONTINUATION SCHOOLS.

The schools that are here classed as technical and continuation schools differ in one important respect from those classed as trade schools—their purpose is not to teach entire trades, but to give scientific and technical instruction for the betterment of those who are for the most part already at work. The manual practice, therefore, in these schools is entirely lacking, or is only for the purpose of making clear the teaching. Many institutions which teach the practice of trades give also the same kind of instruction as the technical and continuation schools, Pratt Institute being a notable example.

ROCHESTER ATHENÆUM AND MECHANICS' INSTITUTE, ROCHESTER, NEW YORK.

The Rochester Athenæum and Mechanics' Institute, of Rochester, N. Y., is the result of a consolidation of the Rochester Athenæum, which was organized in 1830, with the Mechanics' Institute of the city of Rochester, which was organized in 1885. The consolidation was effected June 4, 1891. The corporation has since been most popularly known by the latter portion of its title.

A new building, erected at a cost exceeding \$200,000 and presented to the institute by Mr. George Eastman, was formally opened for inspection by the public April 15, 1901. The building is three stories in height and has a floor space of 2½ acres.

The courses of study are divided into two departments, a department of industrial and fine arts and a department of domestic science and art. In the latter department there are three terms of three months each in day and evening classes. The courses comprehend every branch of domestic work and, except the dressmakers' training class, are intended chiefly for those who desire instruction for home use, and for teachers. The work in the department of industrial and fine arts is arranged to meet the requirements of three classes of pupils, namely: (1) Those who are employed otherwise during the day, and attend only in the evening; (2) those who can devote only one or more days a week, taking special branches; (3) those who



PLATE 216—SCHOOL BUILDING



PLATE 217—KNITTING DEPARTMENT

NEW BEDFORD TEXTILE SCHOOL





PLATE 218—EXPERIMENTAL WEAVING—HAND LOOMS



PLATE 219—POWER WEAVING DEPARTMENT

NEW BEDFORD TEXTILE SCHOOL



attend five days a week and wish to pursue a full course of instruction. The work in the separate evening classes in this department is arranged to cover three years, with sessions two evenings each week, for one term of seven months, extending from the latter part of September to the latter part of April each year. The advance classes are open only to those who have completed the previous year's work, or its equivalent. The day courses are divided into three terms of three months each. The work in each class covers a full course of instruction in the branch taken, and may be completed in from one to three years, according to the number of hours per week devoted to it and the aptitude of the pupil. Besides the industrial and art courses in the day school there is a mechanic arts course of high school grade, a part of which is devoted to manual training, a separate manual training course, normal courses, and Saturday classes for teachers and pupils of the public schools.

The courses of study include free-hand, mechanical, and architectural drawing, ornamental design, composition, and pen and ink drawing, drawing from life, painting in oil and water colors, china decoration, lettering, clay modeling, history of art, mathematics, physics, chemistry, electricity, statics, steam engineering, and industrial training in wood and in iron. A fourth-year class in machine design has been added to the course in mechanical drawing, which will include a study of mechanism, valve motion, machine construction, etc. In the architectural course the aim is not so much the study of architecture as that of building construction. The work in free-hand drawing, composition, and pen and ink drawing is intended to develop the creative ability of the pupils and to equip them for practical work in illustration. In steam engineering the work consists of lectures, discussions and problems on steam, boilers, engines, indicators, pumps, and condensers. It is not the aim of the institute to turn out steam engineers, but rather to give those engaged in the work or interested in the study the chance to improve in that line. The course in industrial training in woodworking is designed for those who desire a thorough knowledge of the best methods of performing the various operations in timber framing, bench work, pattern making, and cabinetmaking. The course in industrial training in iron is intended to cover as thoroughly as possible the working of iron and steel and the making of some finished mechanism or machine tools.

The charges for tuition are as follows: Day classes, per term, free-hand, mechanical, architectural, and design drawing, mathematics, and physics, \$7.50; life class, pen and ink and composition, \$9; history of art, \$4; painting in oil and water colors, \$9 to \$12; dressmakers' training class, \$25. Evening classes, per term, free-hand, mechanical, architectural, and design drawing, first-year course, \$4; second and third year courses, \$5; pen and ink drawing, lettering, clay modeling,

mathematics, electricity, and machine design, \$6; physics, \$10; life class, \$12; practical electricity and industrial training in wood or iron, \$15; statics and steam engineering, \$4; chemistry, \$12 for first-year course and \$15 for second and third year courses.

The school is under the general management of a board of directors. There are 26 instructors in the courses covered by this report, all of whom have had practical training in their respective branches, and a number are also graduates of the school. The number of pupils in the different classes during the year reported was as follows:

PUPILS IN SELECTED CLASSES OF THE MECHANICS' INSTITUTE.

Courses.	Day classes.	Evening classes.	Total.
Electricity and machine design	45	115	160
Physics	19	225	244
Statics and steam engineering	21	24	45
Chemistry	21	39	60
Life class	32	20	52
Practical electricity and industrial training in wood or iron	29	21	50
Mathematics	52	17	69
Chemistry	53	18	71
Physics	7	16	23
Electricity and machine design	16	30	46
Statics and steam engineering	16	39	55
Chemistry	16	27	43
Life class	11	34	45
Total	252	654	906

The value of the property owned by the institute is about \$400,000, 75 per cent of which is devoted to school purposes. The funds for the buildings and equipment were furnished by donations and contributions from the citizens of Rochester. The institute is maintained by tuition fees and contributions from the citizens of Rochester. The cost of maintaining the entire institute is about \$40,000 per annum. At least 65 per cent of this amount is chargeable to the courses covered by this report.

INDUSTRIAL SCHOOLS IN THE SOUTH FOR THE COLORED RACE.

The industrial schools which have been established throughout the South for the education of the colored race have been of a special character because of the peculiar needs of the race and of the region. It has been generally recognized by the leaders in this educational work that the only possible avenue of development for the colored race in the South lies through agriculture and the handicrafts. This has been repeatedly insisted upon in addresses before his students and in public by Mr. Booker Washington, a disciple of the Hampton School and the president of Tuskegee Institute, one of the foremost schools in the work, and this idea has been adopted and put in practice as the



PLATE 220—INSTRUCTION IN STATICS



PLATE 221—INSTRUCTION IN MACHINE WORK

ROCHESTER ATHENÆUM AND MECHANICS' INSTITUTE





PLATE 222—INSTRUCTION IN DRESSMAKING



PLATE 223—INSTRUCTION IN COOKING

ROCHESTER ATHENÆUM AND MECHANICS' INSTITUTE



foundation principle of nearly all schools for the colored race in the South. Many schools offer training in a variety of the common handicrafts and in agriculture for boys, and in dressmaking and millinery, in all kinds of housework, and in the lighter tasks of horticulture and agriculture for girls. The variety of courses depends to a large extent on the number of students and the resources of the institution.

The instruction in most of these schools is not confined to the ordinary subjects in such institutions, but comprehends as well careful training for character and conduct in all the relations of life, small as well as great. The dignity of labor, the nobility of service, is a cardinal principle in the teaching. The expenses of attendance are small, and frequently tuition can be obtained free of charge. The cost of board is very low—from \$6 to \$9 per month, and even this charge can in many instances be met by work in the school; for nearly all the schools do a good deal of work in the trades for themselves and for the surrounding country, and the school farm is usually made to supply the school table. This carrying on of productive work at the trade while learning the trade to pay the expenses of the schooling is a characteristic feature of these schools. Even though not necessary to pay the expenses of the pupils, a certain amount of labor is required in most of the schools.

ARMSTRONG AND SLATER MEMORIAL TRADE SCHOOL, HAMPTON NORMAL AND AGRICULTURAL INSTITUTE, HAMPTON, VIRGINIA.

This institution was established by Gen. S. C. Armstrong, at Hampton, Va., in 1868. Its primary purpose was to give to young colored men and women who had emerged from slavery the right kind of instruction in good conduct, in the rudiments of book knowledge, and in the plain tasks that go with farming, the ordinary handicrafts, and the duties of home and family.

In 1878 the institution was opened to Indians. The United States Government has now for many years contributed annually toward the support of a considerable number of Indian boys and girls, averaging between 15 and 20 years of age. It maintains 120 Indians at the school, paying \$167 per annum for each, which sum meets the cost of board and clothing. From 10 to 20 more are educated here without expense to the Government.

Instruction in the school was at first academic and normal, and other courses have been added from time to time. The regular teaching of trades was taken up and a trade school opened in March, 1897, for which a special building was erected, called the Armstrong and Slater Memorial Trade School.

All trade-school students are required to devote nine hours each day to their trades and two hours to recitations in the night school. The length of each trade course is three years. Tuition free of charge is

provided for all deserving students, but payment for board, clothes, and schoolbooks is required in cash. Expenses are as follows: Board, including washing, fuel, light, and medical attendance and a limited amount of drugs, \$10 per month; books, \$5 in advance at the beginning of each school year. There is an opportunity in the various industries carried on for able-bodied students to earn from \$2 to \$3 per month toward their board, but the school does not promise this in any case. The rate of wages varies according to the real value of the work done, and students' labor for pay is accepted only when satisfactory.

The trade school offers courses in the following departments: Carpentry, painting, wheelwrighting, blacksmithing, machine work, tailoring, bricklaying, plastering, shoemaking, harness making, and steam engineering.

There is also a course in electricity; courses in tinsmithing and printing in connection with the school industries; courses in sewing, cooking, and laundry work for girls who wish to learn these trades; courses in agriculture, horticulture, and dairying.

Instruction in the several agricultural courses is given by means of text-books, lectures, and practice work; class-room work is illustrated by means of specimens, models, charts, photographs, etc. As far as possible each student is required to put in practice the principles taught in the class room. Students taking the courses in agriculture are required to put a certain number of hours each week into recitation, study, drawing, and practice work.

Practice is an important and prominent feature of the course, and for pure practice the student receives no wages. After meeting the requirements as to recitation, drawing, practice, etc., the student is given an opportunity to do necessary work in the department, and is paid according to his ability and the actual time spent in doing the work, being thus enabled to earn something toward paying for board and incidental expenses. Tuition is free.

Twenty acres of land have been devoted especially to practice work. Four acres of this have been laid out as a small model farm. Ten acres have been planted with small and orchard fruits and the remainder is used for experiment and illustration in the growing of farm, truck, and garden crops. In the new domestic science building the department of agriculture has six large rooms, a museum and lecture room, a laboratory for chemistry and physics, a laboratory for botany, horticulture, and entomology, a farm laboratory, a dairy, and a farm engineering room. The department has also two greenhouses. Aside from these the institute has two large farms, which together cover about 700 acres, equipped with buildings, dairy stock, horses, hogs, and poultry.

For the benefit of those who are unable to spare the time for the three-year course in agriculture, shorter courses in agriculture, horticulture, and dairying have been arranged.



PLATE 224—STUDENTS AT WORK ON SCHOOL BUILDING



PLATE 225—INSTRUCTION IN WHEELWRIGHTING

ARMSTRONG AND SLATER TRADE SCHOOL, HAMPTON INSTITUTE

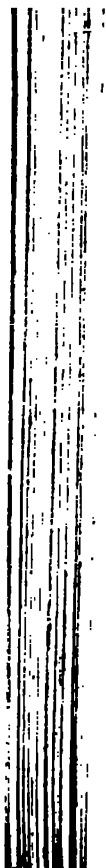




PLATE 226—INSTRUCTION IN TILLAGE



PLATE 227—SCHOOL EXPERIMENT FARM

ARMSTRONG AND SLATER TRADE SCHOOL, HAMPTON INSTITUTE

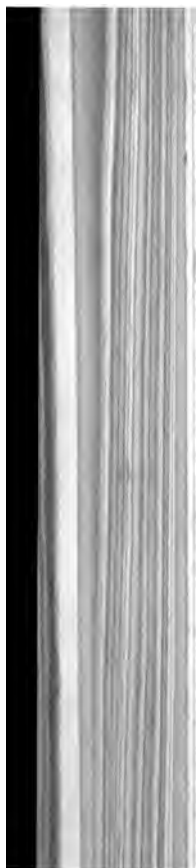




PLATE 228—INSTRUCTION IN COMBINED DRAFT OF ANIMALS



PLATE 229—INSTRUCTION IN JUDGING SWINE

ARMSTRONG AND SLATER TRADE SCHOOL, HAMPTON INSTITUTE



PLATE 230—INSTRUCTION IN COOKING



PLATE 231—INSTRUCTION IN LAUNDRY WORK

ARMSTRONG AND SLATER TRADE SCHOOL, HAMPTON INSTITUTE





PLATE 232—INSTRUCTION IN DRESSMAKING



PLATE 233—INSTRUCTION IN SPINNING AND RUG WEAVING

ARMSTRONG AND SLATER TRADE SCHOOL, HAMPTON INSTITUTE



The trade school also offers to boys from 10 to 17 years old, who live in the immediate vicinity, instruction in the following trades during the months of July and August: Manual training, carpentry, blacksmithing, wheelwrighting, and shoemaking. The students in these classes work from 9 until 12 every morning in the week except Saturday.

It is not expected in this summer course to turn out finished workmen, but it is hoped that the instruction will lead up to the taking of a full trade course as a regular student, and that incidentally much useful knowledge will be acquired.

In addition to the regular teaching of trades and occupations as cited, an opportunity for work and practice at certain trades is provided in the department of productive industry. This department is conducted as a business enterprise and includes industries, open to students who have passed a year in the trade school or training department, as follows: A wheelwright and blacksmith shop; a tin shop; a tailoring department; a shoe shop; a harness shop; a paint shop; a machine shop; a bricklaying and plastering department; the Huntington Industrial Works, including a sawmill and lumber yard, a planing mill, and a carpentry and cabinet shop; a carpentry and repair shop; the normal school press; the engineering department; farming; the sewing and furnishing department; housework, etc.

The general management of the institution is in the hands of the principal and a faculty of 10 members, under the control of the board of trustees.

The number of instructors teaching trades or occupations is 26. All told, there are over 80 instructors in the institution, many of whom are graduates of normal schools, graduates of agricultural colleges, polytechnic schools, and trade schools. In the department of productive industries 12 managers of shops, etc., are employed.

For the year 1899-1900, for which the facts shown in this report were obtained, the number of students in the different courses in the trade classes was as follows:

ATTENDANCE IN TRADE COURSES, HAMPTON NORMAL AND AGRICULTURAL INSTITUTE, 1899-1900.

Trade.	First year.	Second year.	Third year.	Special courses.	Total.
Blacksmithing	12	6	5	10	33
Bricklaying	1	5	3	3	12
Carpentering	9	9	5	14	37
Engineering	5				5
Harness making	2		3	2	7
Machinists	9		3	4	16
Painting	2		2	5	9
Shoemaking	2	2		2	6
Steam engineering	4			3	7
Tailoring	13	7	1		21
Upholstering	1		1		2
Wheelwrighting	6	5	5	3	19
Total	65	34	28	46	173

The cost of buildings, equipment, etc., has been \$757,000, which includes the land, having a valuation of about \$30,000. All of the buildings of recent construction are especially adapted for the purposes for which used, and were chiefly erected by the labor of the students under the direction of the instructors. One of the buildings now in process of construction, which will cost upward of \$40,000, is being built under the superintendence of one of the teachers, and the work of bricklaying, masonry, carpentry, painting, steam piping, etc., is being done mainly by the students. The total annual cost of maintaining the institution is about \$150,000. The necessary funds are raised from contributions and donations of individuals, churches, etc., from one-third of the income of the landscript fund of Virginia, amounting to \$10,000 annually, from money received from the United States Government for the education of 120 Indians, at \$167 each per year, etc.

TUSKEGEE NORMAL AND INDUSTRIAL INSTITUTE, TUSKEGEE, ALABAMA.

This institution, for the training of young colored men and women, was established by an act of the Alabama legislature, appropriating \$2,000, in 1880. It was opened July 4, 1881, in a rented shanty church, with 30 pupils and but 1 teacher. It is the aim of this school to supply, as far as it can, trained workers for the many communities throughout the South where men and women educated in industrial trades are needed. While the teaching is not confined to the trades, and the constant aim of the management is to correlate the literary and industrial training so that it will not be possible to secure the one without the other, yet the industrial training amounts to far more than manual training, as a number of trades are thoroughly taught.

In 1883 the legislature of Alabama increased the annual appropriation for the school to \$3,000, and in 1893 the institution was incorporated under its present name. During the first session of the school the present location, consisting at that time of 100 acres, with three small buildings thereon, was paid for by Northern friends. In all 2,500 acres of land have been acquired, exclusive of 25,000 acres of mineral land granted by the Federal Congress, in January, 1899, for endowment purposes. Six hundred head of live stock—horses, mules, cows, hogs, and sheep—are on its various farms; and fifty vehicles—wagons, carriages, and buggies—constitute the rolling stock of the institution. One hundred and sixty-three thousand dollars received from bequests and gifts, and \$125,000, the probable proceeds from the sale of the Federal land grant, will constitute a permanent endowment fund. The cost of the buildings and equipment of this school can not be exactly stated, but the present valuation of the same may be placed at over \$300,000. The annual cost of maintaining the institution is



PLATE 234—SCHOOL BUILDINGS AND GROUNDS

TUSKEGEE INSTITUTE

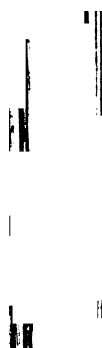




PLATE 235—STUDENTS AT WORK ON SCHOOL BUILDINGS

TUSKEGEE INSTITUTE





PLATE 236—INSTRUCTION IN BLACKSMITHING



PLATE 237—STUDENTS AT WORK IN TRUCK GARDEN

TUSKEGEE INSTITUTE





PLATE 238—SCHOOL DAIRY HERD



PLATE 239—INSTRUCTION IN USE OF CREAM SEPARATOR

TUSKEGEE INSTITUTE





PLATE 240—INSTRUCTION IN COOKING



PLATE 241—INSTRUCTION IN DRESSMAKING

TUSKEGEE INSTITUTE

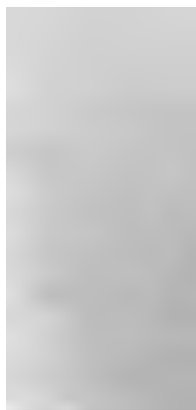


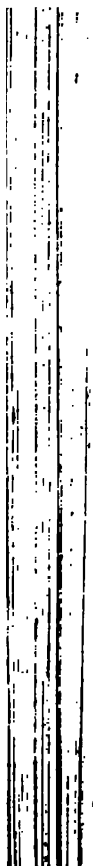


PLATE 242—INSTRUCTION IN BEE CULTURE



PLATE 243—INSTRUCTION IN CARE OF POULTRY

TUSKEGEE INSTITUTE



about \$76,000. The income of the school comes from the endowment fund, appropriations by the State, donations from churches and individuals, and from fees paid by the students. In addition to its annual appropriation of \$3,000, the State now allows the school \$1,500 a year for the support of an agricultural experiment station, the work of which is carried on by the school's agricultural department.

The total number of students enrolled during the year 1899-1900 was 1,231, of whom 872 were males and 359 were females. Of these, 148 withdrew, leaving an average attendance of 1,083, divided between the United States and foreign countries as follows: Africa, 1; United States, 1,072; West Indies, 10. Of these students, 619 took the trade education provided by the institution. The total number of instructors is 75, all colored. Thirty-six of this number confine their teaching to the trades.

Industrial trades are assigned, as nearly as possible, in accordance with the desires of the students. In so assigning a trade the student's natural ability, intelligence, and physical ability to perform the duties required are all considered. In order to enter the school the student must be able to read and write, and understand addition, subtraction, multiplication, and division.

There are two schools maintained covering the same course—the day school and the night school. The day school is intended for those students who pay for their board, study in the day, and have six work-days during the month—one day in each week and every other Saturday. Students are required to work on these days. No student under 14 years of age is admitted on any terms, and good moral character and a good physique are essential. The night school is designed for young men and young women who desire to educate themselves, but are too poor to pay even the small charge made in the day school. Requirements for admission to the night school are the same as the day school, except that no student is admitted who is under 16 years of age or who is physically unable to perform an adult's labor. Fully one-half of the students are obliged to attend the night school for the first one or two years and work during the day in order to obtain money with which to complete the course. Students who are able to attend the day school are not admitted to the night school.

There is no charge for tuition. Expenses are an entrance fee of \$1.50, and board, including furnished room, laundry, lights, fuel, etc., which amounts to \$8 per month. Students are given an opportunity to work out \$2 or \$3 per month, thus leaving only \$5 or \$6 to be paid in cash.

The rules are as follows: Each student is required to have a Bible, and must come provided with table napkins. Regular habits of rest and recreation are required. No student is allowed to leave the grounds

without permission, and no young woman can leave the grounds unless accompanied by one of the female teachers. Male students when permitted to leave the grounds must wear the regulation cap. All students must bathe twice a week. The use of intoxicating drinks and tobacco is forbidden, as are also dice playing and card playing. Students are not permitted, while in school, to take part in any political mass meeting or convention. Students are liable to be dropped for inability to master the studies, irregularity of attendance, or for any failure to comply with the regulations of the school after due notice. The demerit system has been adopted by the school as the principal method of discipline for misconduct, 33½ demerit marks constituting a "warning," and upon receiving three warnings a student is liable to suspension or expulsion, according as the executive council may determine.

All nonresident students are expected to board at the school, unless there is some good reason for a contrary arrangement. Students will not be registered for a shorter period than one month; those who leave before the end of the month are charged for a full month's board. When students desire to leave the school they are required to have their parents or guardians write directly to the principal for permission to do so. Students who sign a contract to work a specified time at some trade or other work must be released from their contract before an application for an excuse from school will be considered. Any student leaving without a written excuse will not be allowed to return, and students under contract will not only be dismissed but will forfeit whatever cash there may be to their credit in the treasury. Students must settle their accounts before leaving school.

All students must supply themselves with books at the beginning of the year. They must be paid for in cash. Students are not allowed to retain firearms in their possession. The commandant of cadets will retain and give receipts for any brought. Low or profane language will subject a student to severe discipline. Students are liable to fine, reprimand, confinement, or other punishment. Letter writing is subject to regulation, and all mail and express packages are inspected and contents noted. Wardrobes and rooms of students are subject to inspection and regulation, at all times, by proper officers. Students are required to be present at the daily devotional exercises and to attend Sabbath school and church services on Sunday.

The course of study is arranged for four years.

The agricultural and trade work is carried on in connection with the four year course in the academic department. Instruction and training are given in 30 trades, the special purpose being to teach those most likely to be of use throughout the South.

MOUNT MEIGS COLORED INDUSTRIAL INSTITUTE, WAUGH, ALABAMA.

This institution for the education of the colored youth was established in 1885 by Miss Cornelia Bowen, a graduate of Tuskegee Normal and Industrial Institute. This school has four buildings, including one devoted to industrial training. There are 5 teachers and an average attendance of 200 pupils.

SNOWHILL INDUSTRIAL INSTITUTE, SNOWHILL, ALABAMA.

This school was established by William J. Edwards, who graduated from Tuskegee in 1893. It has already over 300 pupils and employs 12 teachers, all of them graduates of Tuskegee. Nine industries are taught, special attention being given to farming.



HAND AND MACHINE LABOR.

NUMBER OF HOURS WORKED UNDER EACH METHOD IN PRODUCING SELECTED UNITS OF MANUFACTURE.

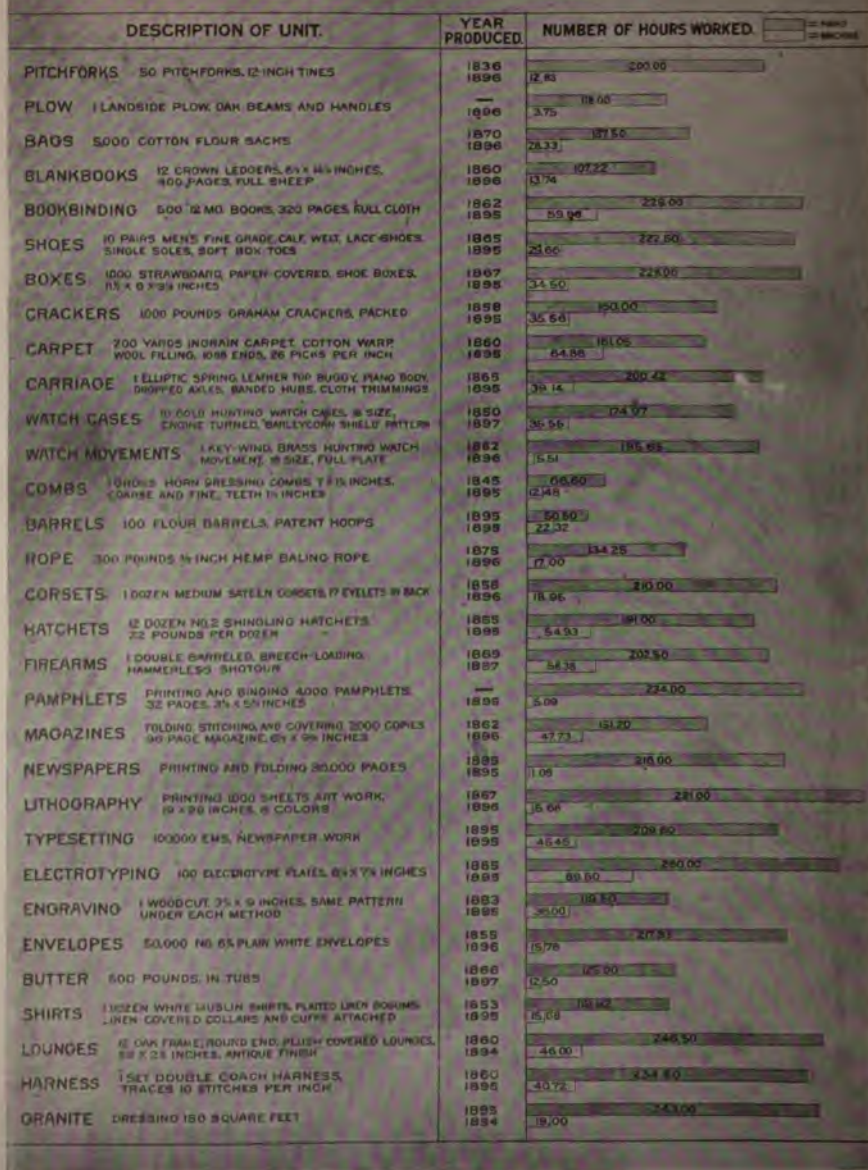


CHART 245

HAND AND MACHINE LABOR IN THE UNITED STATES.

One of the most interesting of the reports of the Bureau of Labor is the Thirteenth Annual, published in 1898. This report presents the results of an investigation into hand and machine labor, showing in detail a comparison of the operations necessary in producing 672 distinct units in 88 industries by hand processes and by the most modern machine methods. The report also shows the time consumed by the workmen and the cost of their labor for each operation under the two systems, as well as totals of the time and labor cost of each unit covered.

A description of some of the most important details of the report would doubtless be of interest, as the publication has been out of print for several years, and is therefore no longer available for distribution. It is not possible, however, for lack of space, to review the report in this Bulletin. The exhibit relating to the subject consists of two large graphic charts, reproductions of which are given herewith (Plates 244 and 245). The first chart shows the number of hours worked under the hand and under the machine methods in producing 31 selected units of manufacture, while the second presents similar information for 15 selected units of agriculture, 1 of mining, 6 of quarrying, and 4 of transportation.

LABOR LEGISLATION IN THE UNITED STATES.

BY G. A. WEBER.

The present article is intended to give a general summary of the more important labor laws that have been enacted and were in force in the United States at the close of the year 1903. In view of the fact that the Bureau of Labor has in press as its Tenth Special Report a complete compilation of the labor laws in the United States enacted and in force at that time, it has been deemed best to include here only those classes of laws which are of greatest public interest at the present time. For the same reason it seems unnecessary to reproduce any of the statutes by way of illustration.

The legislation considered relates to the following subjects:

1. Labor in factories, workshops, sweat shops, mercantile establishments, bakeries, laundries, and on building-construction work.
2. Mine labor.
3. Railway labor.
4. Hours of labor.
5. Sunday labor.
6. Labor of women.
7. Labor of children.
8. Licensed occupations.
9. Payment of wages.
10. Liability of employers for injuries to employees.
11. Boycotting, blacklisting, intimidation, etc.
12. Labor organizations.
13. Boards of conciliation and arbitration.
14. Bureaus of labor statistics.
15. Free employment bureaus.

Eleven of the above classes are illustrated by charts reproduced herewith, showing in graphic form the character of legislation enacted and in force in each State. By this means the nature and extent of the legislation indicated can be ascertained at a glance.

In considering the labor legislation enacted in the various States it must be remembered that in States in which manufacturing and mining industries prevail, such as New York, Pennsylvania, Massachusetts,

factory, and in the latter case there is more occasion for the employment of inspectors than in States where industries are most numerous, as in the South and West.

For a complete compilation of labor laws the reader is referred to the Tenth Special Report of the Bureau of Labor, published by the Bulletin of this Bureau, in which are reproduced the laws enacted from time to time by the various States and Territories and by the Federal Congress. The Bulletins are also accessible through the Library.

LABOR IN FACTORIES, SWEAT SHOPS, ETC.

Laws for the regulation of labor in factories, workshops, mercantile establishments, sweat shops, bakeries, laundries, and on building-construction work have been enacted in the various States for the purpose of protecting the health and safety of employees (see chart). For the proper enforcement of these regulations many of the States have made provision for inspection services.

INSPECTION.

In 27 States the laws provide for the appointment of inspectors of factories and workshops, whose duties consist of visiting and inspecting factories, workshops, mills, and, in some cases, mercantile establishments, sweat shops, bakeries, laundries, and building-construction work, and enforcing the laws concerning the same. In 10 of the States the inspectors are required to prepare statistics of accidents in the factories and workshops in these States, being required to report all accidents occurring in their establishments.

Factory inspectors in some States have, in addition to the enforcement of factory laws, duties other than those indicated above. In some States they are intrusted with the duties of inspecting buildings, boilers, elevators, mines, etc., which functions are usually exercised by special officers appointed for those purposes.

In California, Iowa, Kansas, Kentucky, Maryland, Michigan, Minnesota, Missouri, Montana, Nebraska, New York, Oregon, Washington, West Virginia, and Wisconsin the duties of factory inspectors are combined with those of the bureaus of labor statistics.

FACTORIES AND WORKSHOPS.

What are usually known as factory acts relate to (1) the protection of the health of employees, such as regulations requiring the proper ventilation, lighting, and heating of factories and workshops, the provision of exhaust fans to prevent dust or other deleterious products from being inhaled by the operatives, the lime washing or painting of walls, the provision of seats and separate toilet facilities for female

and the prohibition of overcrowding; (2) the prevention of accidents, such as regulations prohibiting the employment of women and children to clean machinery in motion or operate dangerous machinery or of children to run elevators, requiring that machinery and vats containing molten metal or hot liquids be properly guarded, that mechanical belt and gearing shifters, means of communication between the engineer's room and rooms where machinery is used, and safety appliances on elevators be provided, that hoistway openings be properly railed off, that sides or railings be placed on stairways, that special precautions be taken in cases of dangerous or injurious occupations, or where explosive or highly inflammable compounds are handled, that fire escapes be provided, and that doors in factories and workshops be so hung as to open outward, and that they be kept unlocked; and (3) the conditions of employment of women and children, such as regulations restricting the hours of labor, prohibiting night work, and requiring intervals of rest during the working day.

As the States having these regulations are shown in the chart at the end of this chapter, it is unnecessary to enumerate them in this place.

MERCANTILE ESTABLISHMENTS.

Laws concerning the regulation and inspection of mercantile establishments relate chiefly to the hours of labor and the conditions of employment of women and children, and include provisions prohibiting night work, requiring intervals of rest, fixing an age limit for the employment of children, requiring suitable and sufficient wash rooms and water-closets, lunch rooms, seats for females, etc. These laws are considered in the chapters relating to women and children. They are usually enforced by the factory inspectors.

SWEAT SHOPS.

The laws considered under this head are such as require the inspection and regulation of work done in family homes, in shops located in tenement or dwelling houses, or in buildings in the rear of the same. The work so regulated consists mostly of the manufacture of clothing, artificial flowers, tobacco, and other special articles for sale.

Twelve States, namely, Connecticut, Illinois, Indiana, Maryland, Massachusetts, Michigan, Missouri, New Jersey, New York, Ohio, Pennsylvania, and Wisconsin, have enacted laws regulating sweat shops.

These laws usually prohibit the manufacture, repair, alteration, or finishing of apparel for wear or adornment, and the manufacture of purses, cigars, cigarettes, or umbrellas in rooms or apartments in tenement or dwelling houses except under certain prescribed conditions. In Massachusetts the law relates only to wearing apparel. The factory inspectors are required to visit and inspect the sanitary

rooms or apartments coming within the scope of the laws, and in some cases to report cases of infectious or contagious diseases, etc., to the health officers. In Illinois this class of work is prohibited in rooms or apartments in tenement or dwelling houses except by license of the health officer living therein, and in Missouri such work is prohibited in more than three persons outside the members of the family, and no further restrictions are made in these cases. In the non-factory States enumerated, however, members of the family may engage in such work only under certain conditions. Provision is also made for the regulation of work in shops not connected with living or sleeping rooms, but located in tenement or dwelling houses, or in buildings in the rear of the same. In Maryland, Massachusetts, and New York families must procure a license from the factory inspector before being permitted to perform the above-mentioned work in their dwelling, and manufacturers may not give them work unless they have such licenses. In Indiana, Maryland, Michigan, New Jersey, New York, Pennsylvania, and Wisconsin the law prescribes that no person, partnership, or corporation may hire or employ persons to work in rooms or apartments in tenement or dwelling houses or in buildings in the rear of such houses without a written permit or license from the factory inspector. In Connecticut and Ohio the laws make no provision for the issuance of a license. In Massachusetts a license is not required for work done in rooms or apartments not connected with living or sleeping rooms and which have a separate entrance.

The written permit or license obtained from the factory inspector is not issued until after an inspection has been made of the premises and they have been found in a sanitary condition and fit to work in. Usually, the license or permit must specify the maximum number of persons that may be employed in the room and it must be conspicuously posted. This number is one person for every 250 cubic feet of air space in the daytime and, usually, one person for every 400 cubic feet at night. The licenses may be revoked at any time when the public health requires it.

In all the States the factory inspectors have access to the rooms or apartments in tenement or dwelling houses where clothing, etc., are made, including in most cases rooms where only members of the family are engaged in such work. This is for the purpose of seeing that the regulations regarding cleanliness, light, heat, ventilation, overcrowding, etc., are enforced, and that the articles made are not exposed to infection or contagion and are free from vermin. In Illinois, Massachusetts, Michigan, New York, and Wisconsin the factory inspectors or the boards of health may seize, condemn, or destroy articles containing infectious or contagious matter or vermin which are found either in workshops or exposed for sale. In Michi-

gan health officers and physicians are required to report to the deputy factory inspectors of their respective districts all cases of contagious or infectious diseases coming officially to their knowledge. In Massachusetts garments made in tenement or dwelling houses in which families have not procured a license, and in Missouri and New York goods made in violation of the law must be conspicuously labeled "tenement made." In Missouri, if made under unclean or unhealthy conditions, they must be labeled "made under unhealthy conditions." These provisions apply to articles made outside as well as within the State.

In addition to the requirement in most States that persons, firms, or corporations giving out work to be done in tenement or dwelling houses must procure licenses or see that the persons performing the work have procured licenses, the States of Maryland, Michigan, Missouri, New York, Ohio, Pennsylvania, and Wisconsin require such persons, firms, or corporations to keep a register of the names and addresses of all persons to whom work is given or with whom they have contracted for the performance of work to be done in tenements or dwellings. Penalties of from \$20 to \$500 or imprisonment of from ten days to one year are prescribed for violation of the sweat-shop laws.

BAKERIES.

Laws have been enacted for the purpose of protecting the health of employees and of the public, by requiring cleanliness, proper plumbing and draining, and other sanitary arrangements, and regulating certain conditions of labor in establishments used for the manufacture of bread, cakes, biscuits, pies, pretzels, macaroni, confectionery, etc.

Eleven States have enacted bake-shop laws. Those of Connecticut, Massachusetts, New York, Ohio, and Washington relate only to bakeries; those of Minnesota, Missouri, New Jersey, and Wisconsin relate also to confectioneries. In Pennsylvania the law relates to bakeries, pretzel and macaroni establishments, and in Indiana to bakeries, confectioneries, canning, packing, pickling, preserving, and all other establishments for the manufacture of food products. In all these States the laws require that the buildings occupied should be properly drained and plumbed, seven States requiring also that they be ventilated by air-shafts, windows, or ventilating pipes. In four of the States the rooms used for the manufacture of flour or meal foods are required to have impermeable floors, constructed of hard wood saturated with linseed oil, or of cement or tiles laid in cement. In three other States this requirement is made optional with the factory inspectors. Ten States require the walls to be plastered and either painted or whitewashed, and in some cases the ceilings must be ceiled with either wood or metal. When whitewashed, the wash must usually be renewed every three months, this requirement being in some cases

optional with the inspector. In ten States it is required that furniture and utensils be so arranged that they and the floor may always be easily kept clean and in a sanitary condition.

In all the States having bake-shop regulations, wash rooms and water-closets must be provided with ventilation separate and apart from rooms where food products are manufactured, and no water-closet, earth closet, privy, or ash pit may be within or communicate directly with such rooms. In New Jersey and New York this applies also to bake shops in hotels and restaurants. Sleeping places must in all cases be separate and distinct from rooms where food products are manufactured or stored, and in four States if the sleeping rooms are on the same floor they are subject to inspection by the factory inspectors. In Minnesota and Wisconsin workmen in bakeries and confectioneries must be furnished with caps and slippers, or shoes, and an external suit of coarse linen, to be used only while at work, and these garments must be kept in a clean condition. For this change of clothes separate dressing rooms must be provided.

In 5 States the use of cellars or basements for bake shops is prohibited unless they are put in the sanitary condition required by law. In 4 of these States the cellars must be at least 8 feet high. In Connecticut and Washington no cellar or basement may be used as a bakery, and those used at the time of the passage of the act can not be reopened for use as bakeries when once closed. A similar restriction exists in Minnesota in the case of any room the floor of which is more than 2 feet below, and in Wisconsin 5 feet below, the street or adjacent ground.

Six States prohibit the employment in bake shops of persons who are affected with consumption of the lungs or with scrofulous or venereal diseases or with any communicable skin affection, and employers are required to maintain themselves and their employees in a clean condition while manufacturing or handling food. In Indiana cuspidors must be provided, and no person is permitted to spit upon the floor or walls of any place where food products are manufactured. Notices to this effect must be posted in all such places.

In 4 States provision is made restricting the hours of labor of children or of adults in bake shops.

In Connecticut, Indiana, Missouri, New Jersey, New York, and Ohio the bake-shop laws are enforced and the bakery inspections made by the factory inspectors, and in Washington by the Commissioner of Labor. In Pennsylvania the provisions regarding employees affected with diseases are enforced by the health board, but all other provisions are enforced by the factory inspectors. In Minnesota and Wisconsin the State bureau of labor and the State and local health boards are charged with the enforcement of these laws. In Massachusetts this

duty devolves upon the local boards of health only. In Connecticut, New Jersey, New York, and Ohio the inspectors, and in Washington the Commissioner of Labor, are required to inspect all bake shops and to issue certificates of inspection to all bakeries which have complied with the requirements of the bake-shop acts. In Minnesota and Wisconsin the common councils in cities of 5,000 population and over may by ordinance provide for licensing bakeries.

In nearly all the States that have enacted bake-shop laws a time limit of 30 or 60 days is fixed within which owners, lessees, etc., of such shops must make such alterations or installations as the factory inspectors or health boards may require in accordance with the provisions of the bake-shop acts. Failure to comply with these orders, or other violations of the bake-shop acts, are punishable by fines, usually from \$20 to \$50 for the first offense, and by higher fines or imprisonment for subsequent offenses.

LAUNDRIES.

Eight States have statutes regulating work in laundries. New York and Hawaii have special legislation concerning labor in laundries. In the other 6 States laundries are simply included in the number of industries covered by the factory regulations.

The New York law, besides providing that the factory regulations should apply to laundries, prohibits sleeping in rooms used for public laundries, and requires all such laundries to be kept in a clean condition and free from vermin and all impurities of an infectious or contagious nature. The law does not apply to females engaged in doing custom laundry work at home for regular family trade.

The Hawaiian law provides for the erection of laundries and wash-houses by the government, to be rented to private persons, and prohibits any one from carrying on the business of laundry keeping or washing for hire within the limits of the city of Honolulu except in such buildings. Special permits may be granted for the erection of steam laundries by private persons.

BUILDING CONSTRUCTION.

A number of States have laws relating to the protection of employees on buildings, which may well be considered in this connection.

The States having such laws are California, Indiana, Maryland, Massachusetts, Minnesota, Missouri, New York, Ohio, Pennsylvania, and Wisconsin. These laws are sometimes enforced by factory inspectors, but usually by building inspectors or other local authorities. The regulations relate to the safety of the scaffolding, ropes, blocks, or pulleys used, the provision of floors in unfinished buildings, etc.

MINE LABOR.

Mine-labor legislation is necessarily confined to States and Territories which produce coal or other minerals in sufficient quantities to justify the enactment of special laws for the protection and safety of persons employed in the mines. Thirty-four States and Territories and the Federal Government have enacted laws of this character. The Federal statute applies to the organized and unorganized Territories having coal mines in operation. (See chart.)

MINE INSPECTION.

Twenty-five States and the Federal Government have made provision for the appointment of mine inspectors, whose duties are to inspect the mines and see that the mining laws are enforced. The mine inspectors are usually appointed by the governor and are required by law to have a technical training and experience, nine States requiring candidates for this office to pass an examination.

The number of mine inspectors is sometimes designated in the law and sometimes made dependent upon the number of mines in operation. In Maine, New Jersey, and New York, where the mining operations are not important, the enforcement of the mining laws and the inspection of mines is intrusted to the factory inspectors.

In all of the States having mine inspection services the laws provide that the inspectors shall have access to the mines at all reasonable hours, and that the owners and operators shall furnish them the necessary facilities for making their inspections. Records are required to be made of these inspections and annual or biennial reports made to the governor or the State legislature.

In 23 States and in the Territories affected by the Federal statute mine operators are required to report all serious accidents in mines to the mine inspectors, and in 13 States periodical reports must be made to the mine inspectors, generally once a year, showing the number of persons employed, the output, and other information called for by the inspector. In most of the States copies of maps showing the mining operations must be filed with the mine inspectors.

In Colorado, Ohio, and Wyoming the miners in any mine may appoint a committee from among their number to inspect the mine and machinery, and the owner is required to afford them every facility for such inspections.

In nearly all the States where mine inspectors are provided for they are given power to issue and enforce orders concerning the health and safety of employees as regulated by the law.

MINE REGULATION.

The provisions for the regulation of mines are quite similar in the leading mining States, the difference being mainly in the extent to which regulation is undertaken. They may be grouped into the following classes, namely: Provisions of law (1) concerning employment in mines; (2) insuring the health and safety of mine employees; (3) making special regulations for mines generating fire damp or other explosive gases; (4) protecting the rights of miners by regulating the manner of weighing or measuring the quantity of coal mined.

EMPLOYMENT IN MINES.

Under this head may be grouped provisions of law prohibiting the employment of women and children, restricting the hours of labor of adults, requiring the examination and defining the duties of mine bosses, fire bosses, and other responsible employees.

The employment of women in mines is prohibited in 12 States, and that of children in 27 States and in the Territories affected by the Federal statute. The legislation concerning woman and child labor in mines is considered under the subject of woman labor and child labor, respectively.

Six States and 1 Territory have laws restricting the hours of labor of employees in mines to eight per day. These are Arizona, Colorado, Missouri, Montana, Nevada, Utah, and Wyoming. In Maryland ten hours per day are prescribed for mine workers, but contracts may be made for a longer working day.

Sixteen States and 1 Territory have provisions of law defining the duties of mine managers, mine bosses, hoisting engineers, or other employees holding positions of responsibility in mines. Ten States have provisions requiring such employees to pass examinations before being permitted to practice their vocations. These are considered under the title of "licensed occupations."

HEALTH AND SAFETY OF MINE WORKERS.

The regulations for the protection of the health and for the safety of employees in mines are so numerous and varied that they can not be enumerated in this outline. The most important are provisions requiring at least two separate openings from each seam to the surface, means for adequate ventilation, a sufficient supply of lumber for props, shaft openings to be fenced or furnished with safety gates, brakes and flanges on cable drums, safety catches and covers on cages, means of verbal communication between the top and bottom of shafts, codes of signals, traveling ways at the bottom of shafts, shelter holes in underground gangways to avoid passing cars, guards on machinery,

the closing or fencing of abandoned shafts and other openings, and the inspection of steam boilers in mines; limiting the number of persons on cages and prohibiting the use of cages by passengers while coal is being raised; specifying the kind and quality of oil that may be used for lighting; regulating blasting operations and the handling of explosives, and requiring mining rules to be conspicuously posted.

MINES GENERATING FIREDAMP.

The most important provisions concerning mines generating firedamp or explosive gases are those requiring the daily examination of such mines by a mine or fire boss before the miners go to work, providing that safety lamps be owned by the mine owners and cared for by their officials, and requiring bore holes to be made in advance of mine workings.

RIGHTS OF MINE EMPLOYEES.

Nearly all the coal-mining States have laws intended to protect the rights of employees whose earnings depend upon the quantity of coal mined. In 16 States and 1 Territory the laws require that mines be provided with suitable scales for weighing coal; in 12 States and 1 Territory, that the weighmen take an oath to perform their duties faithfully and justly; in 16 States and 1 Territory, that mine workers be permitted to employ check weighmen at their own expense; and in 11 States, that coal must be weighed before screening. Other provisions of law concerning the payment of mine workers are such as forbid the truck system, require wages to be paid in lawful money, and fix the wage periods of mine workers, which are considered under the subject of wages.

In the accompanying chart the provisions appearing in the column headed "United States" have been enacted by Congress and relate to all organized and unorganized Territories of the United States having coal mines in operation.

RAILWAY LABOR.

The railway labor laws enacted by the various States and by the Federal Government (see chart) have, with few exceptions, the object of protecting the health and safety and the rights of employees, and of reducing to a minimum the liability of the traveling public to accidents and inconvenience on account of acts of employees. They may be considered under five groups, namely: Laws (1) regulating the employment of certain classes of persons, (2) prohibiting certain acts of railway employees, (3) protecting the rights of railway employees, (4) requiring certain mechanical equipment on railways for the protection of the health and safety of employees, (5) concerning the settling and investigating of accidents to employees.

LEGISLATION RELATING TO RAILWAY LABOR.

Legislation.	U. S. Ala. Alaska. Ariz. Ark. Cal. Colo. Conn. Del. D. C. Fla. Ga. Hawaii. Idaho. Ill. Ind. Iowa. Kans. Ky. La. Me. Md. Mass. Mich. Minn. Miss. Mo. Mont. Nebr. Nev. N. H. N. J. N. Mex. N. Y. N. C. N. Dak. Ohio. Okla. Oreg. Pa. P. R. R. I. S. C. S. Dak. Tenn. Tex. Utah. Vt. Va. Wash. W. Va. Wis. Wyo.
Employment of railway labor:	
Examination of certain employees required	
No telegraphers under 18 years of age	
Hours of labor limited	
No intoxicated persons to take charge of trains, etc.	
Acts of railway employees:	
Penalty for negligence provided	
Abandonment of locomotives, etc., prohibited	
Obstruction of trains, etc., prohibited	
Refusal to move cars of other companies prohibited	
Rights of railway employees:	
Companies liable for wage debts of contractors	
False charges against employees prohibited	
Mechanical equipment for safety of employees:	
Automatic couplers required	
Power brakes required	
Frogs, switches, and guard rails to be blocked	
Telltails at bridges or tunnels required	
Height of bridges or wires over tracks regulated	
Height of drawbars on cars regulated	
Grab irons on box cars required	
Inclosed platforms on street cars required	
Equipment of safety appliances to be reported.	
Reporting and investigating accidents:	
Railway companies to report accidents.	
Railway commissioners to investigate accidents.	

◆ **Applies to all railroads engaged in interstate commerce.**

Some of the laws included in the third, fourth, and fifth groups have received the attention of the Federal Congress, and apply to all railways engaged in interstate commerce. In all other cases the laws apply only to railway labor within the borders of those States in which the laws have been enacted.

Most of the railway labor laws apply only to steam railways, but there are others which apply, or may be construed as applying, also to street railways. Others apply only to street railways. In this outline these laws are considered together.

EMPLOYMENT.

The laws considered under this head were enacted to secure the appointment of proper persons in positions of responsibility and to prevent them from becoming incapacitated from overwork while on duty. To this end the law of Alabama requires the examination and licensing of train dispatchers, conductors, firemen, flagmen, brakemen, trackmen, and switchmen. In Massachusetts and Ohio employees in positions which require them to distinguish form or color signals must be examined for color blindness or defective sight, and be supplied with certificates of qualification. In Georgia, telegraph operators must be examined and obtain certificates of competency. In Ohio, conductors of trains must have had at least two years' experience as conductors or brakemen, locomotive engineers three years' experience as locomotive firemen, and flagmen two years' experience as brakemen. In New York, persons employed as motormen or gripmen must be examined and thoroughly instructed, and in Washington they must have at least three days' instruction before being permitted to take charge of cars. In Minnesota and New York, illiterates are prohibited from being employed or from accepting employment as locomotive engineers. In Colorado, Georgia, and New York, telegraph operators who are intrusted with the transmission of orders for the movement of trains must be at least 18 years of age and have one year's experience as telegraph operators.

Statutes limiting the hours of labor of railway employees have been enacted in Arkansas, Arizona, California, Colorado, Florida, Georgia, Indiana, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Nebraska, New Jersey, New York, Ohio, Pennsylvania, South Carolina, Texas, and Washington. These and the laws relating to the examination of railway employees are more fully considered in the sections on hours of labor and on licensed occupations, respectively.

ACTS OF RAILWAY EMPLOYEES.

These are laws passed for the purpose of protecting the railroad companies and the public from such acts of carelessness, violence, or inattention to duty on the part of employees as might endanger life or

property or cause inconvenience to the public. The penalties in these cases are usually severe, the offenses being sometimes regarded as felonies.

Twenty-three States and Territories have passed laws providing penalties of from a few months to fifteen years' imprisonment, or fines ranging from \$50 to \$5,000, for acts of negligence, carelessness, want of skill, disobedience of orders, etc., on the part of engineers, conductors, brakemen, switch tenders, train dispatchers, telegraph operators, motormen on street railways, or other persons in the railway service, resulting in death or injury to persons or property. In Illinois a penalty is provided for negligently injuring or frightening horses, etc., or destroying or injuring trunks and other baggage by baggage masters, express agents, stage drivers, etc.

Of the various subjects considered under this head that of intoxication of railway employees has received the most attention by the different legislatures, 26 States and Territories having passed laws on this subject. In most of the States the laws provide that locomotive engineers, conductors, switch tenders, train dispatchers, or other persons in charge of locomotives, trains, cars, or switches who are intoxicated while on duty are guilty of a misdemeanor. In Mississippi and Vermont this act is made a felony. In California and Missouri it is a felony if an accident results or life or property is endangered. In Illinois, Michigan, and Vermont the employment as conductors, engineers, etc., of persons addicted to drinking intoxicating beverages is prohibited. In a number of States the laws concerning intoxication also apply to motormen and drivers on street cars.

The remaining laws coming within this group are directed against acts of employees in furtherance of strikes or other labor disputes which might result in injury to property or danger or inconvenience to the public. In 7 States it is a misdemeanor for persons in charge of locomotives, cars, or trains to abandon them at any point other than their destination. In 9 States it is a misdemeanor to obstruct, injure, or delay transportation by violence, intimidation, or other interference with employees. In 4 States it is a misdemeanor for employees in furtherance of strikes or other disputes on other roads to refuse to move the locomotives or cars of those roads.

RIGHTS OF RAILWAY EMPLOYEES.

A number of States have enacted special laws for the safe-guarding of the interests of employees of railway companies.

Twelve States make the railroad companies liable for the wage debts of contractors.

The statutes concerning the wages of railway employees are considered in the chapter on wages.

The Federal statute of June 1, 1898, relating to the arbitration of labor disputes between common carriers engaged in interstate commerce and their employees, has the following provisions concerning the rights of employees:

SEC. 9. Whenever receivers appointed by Federal courts are in the possession and control of railroads, the employees upon such railroads shall have the right to be heard in such courts upon all questions affecting the terms and conditions of their employment, through the officers and representatives of their associations, whether incorporated or unincorporated, and no reduction of wages shall be made by such receivers without the authority of the court therefor upon notice to such employees, said notice to be not less than twenty days before the hearing upon the receivers' petition or application, and to be posted upon all customary bulletin boards along or upon the railway operated by such receiver or receivers.

SEC. 10. Any employer subject to the provisions of this act, and any officer, agent, or receiver of such employer who shall require any employee, or any person seeking employment, as a condition of such employment, to enter into an agreement, either written or verbal, not to become or remain a member of any labor corporation, association, or organization; or shall threaten any employee with loss of employment, or shall unjustly discriminate against any employee because of his membership in such a labor corporation, association, or organization; or who shall require any employee or any person seeking employment, as a condition of such employment, to enter into a contract whereby such employee or applicant for employment shall agree to contribute to any fund for charitable, social, or beneficial purposes, to release such employer from legal liability for any personal injury by reason of any benefit received from such fund beyond the proportion of the benefit arising from the employer's contribution to such fund; or who shall, after having discharged an employee, attempt or conspire to prevent such employee from obtaining employment; or who shall, after the quitting of an employee, attempt or conspire to prevent such employee from obtaining employment, is hereby declared to be guilty of a misdemeanor, and, upon conviction thereof in any court of the United States of competent jurisdiction in the district in which such offense was committed, shall be punished for each offense by a fine of not less than one hundred dollars and not more than one thousand dollars.

In Arkansas and Missouri it is a misdemeanor for any person to make false charges against a railway employee with regard to the receipt of money for fare, etc.

The State of Kansas has a statute making special provision by which railway employees may be enabled to vote in any part of the State when absent from the legal residence on railway business on election day.

In Massachusetts it is unlawful to divulge the names of railway employees who make complaints concerning safety appliances, etc.

MECHANICAL EQUIPMENT OF RAILWAYS.

The statutes coming within this group are intended for the protection of the health and safety of railway employees. The dangerous character of their employment calls for legislation requiring such mechanical appliances as will reduce their liability to injury to a

dition. In this country considerable attention has been given to the subject of regulation by the Federal Congress and by the different State legislatures.

The Federal Government has a law requiring all common carriers engaged in interstate commerce to supply their trains with automatic equipment, power brakes and certain other safety appliances.

In addition to the Federal statute which governs common carriers engaged in interstate commerce, 19 States have laws requiring automatic couplers on railway trains, 13 States have laws requiring air or power brakes on locomotives and cars, 2 States have laws requiring grab bars on sides of box cars, and 1 State has a law regulating the height of drawbars on cars. These laws apply in some cases only to passenger trains, in some only to freight trains, and in others to all trains.

Twelve States require the blocking of frogs, switches, and guard rails; 10 States require bridge guards or telltales at approaches to bridges, tunnels, etc.; 7 States regulate the height of bridges and wires over railway tracks; New York requires safety switches on main line tracks, and prohibits the use of "coal jimmies," and Vermont requires ladders or steps to be placed at the end or inside of cars. In Ohio full crews are required on freight and passenger trains, and in South Carolina there must be at least one brakeman to every two cars on passenger trains, except when power brakes are used, and one brakeman on the last car of every freight train. In Arizona, on grades of over 95 feet to the mile on mountain divisions, there must be at least one brakeman for every 600 tons. In Michigan printed copies of rules and regulations must be furnished to employees, and in New York and Ohio railroad companies are required to make reports to the railroad commissioners showing the number of safety appliances with which their roads have been equipped.

Twenty-five States have laws requiring street-railway companies to have inclosed platforms on the front of cars for the protection of motormen, gripmen, or drivers.

New Jersey has a law requiring street-railway companies to provide seats for horse car drivers.

ACCIDENTS.

A Federal law requires common carriers engaged in interstate commerce to make regular reports of accidents to the Interstate Commerce Commission. In Alabama, Connecticut, Michigan, Mississippi, South Carolina, and Vermont accidents must be reported to the railroad commissioners. In Mississippi accidents causing delay or injuries must be telegraphed and a written report made afterwards to the railway commission. In South Carolina accidents causing injury to persons

must be reported immediately to an accessible physician and notice given in writing to the railway commissioners within twenty-four hours.

Four States have laws requiring railroad commissioners to investigate accidents to railway employees.

WORKMEN'S TRAINS.

Massachusetts has a law requiring railroad companies to run workmen's trains at specified hours of the day.

HOURS OF LABOR.

The statutes relating to hours of labor (see chart) that have been enacted in the various States may be considered under five groups, namely: (1) General laws which merely fix what shall be regarded as a day's labor in the absence of contract; (2) laws defining what shall constitute a day's work on public roads; (3) laws limiting the hours of labor per day on public works generally; (4) laws which limit the hours of labor in certain occupations; (5) laws which specify the hours per day or per week during which women and children may be employed. The statutes considered in the first four groups relate to employees regardless of age or sex.

LAWS RELATING TO A LEGAL WORKING-DAY.

The laws considered under this head are such as take the form of defining what shall constitute a day's work in the absence of a contract, but place no restriction upon the number of hours that may be agreed upon.

The following 10 States have passed laws declaring that eight hours shall be regarded a legal day's work unless otherwise agreed: California, Connecticut, Illinois, Indiana, Missouri, Montana, New York, Ohio, Pennsylvania, and Wisconsin. The following 7 States fix the legal working-day at 10 hours: Florida, Maine, Michigan, Minnesota, Nebraska, New Hampshire, and Rhode Island. In New Jersey a week's work is defined as consisting of 55 hours.

In some States these laws apply to all industries, while in others exceptions are made in the case of persons engaged in agricultural or domestic labor. In a few cases the statutes do not apply to persons engaged by the week, month, or year. Florida requires agreements for more than 10 hours per day to be in writing.

The provisions of law defining a legal day's work are in some cases separate statutes, and in others they are parts of acts relating to the hours of labor on public works, the hours of labor of women and children, etc.

HOURS OF LABOR ON PUBLIC ROADS.

The laws regulating the number of hours of service that an employee or person engaged in labor upon the public highways, or upon the public works, employed for wages or to persons petitioning for a writ of habeas corpus, or payment of poll, road, or other taxes, are in the following States: The United States of this date, Arizona, Idaho, Iowa, Missouri, Montana, Nebraska, Nevada, New Mexico, New York, Oklahoma, Oregon, South Carolina, South Dakota, Tennessee, Texas, Wisconsin, and Wyoming. Eight hours are prescribed for a day's work in each of these States, except in South Carolina, where ten hours' labor is required.

HOURS OF LABOR ON PUBLIC WORKS.

The laws relating to the hours of labor on public works include one that places a restriction upon the hours of labor and are accompanied by a criminal provision, providing penalties for their violation.

The Federal Government and the following States and Territories are limiting the hours of labor on public works to 8 per day: Arizona, Colorado, Delaware, District of Columbia, Hawaii, Iowa, Kansas, Kentucky, Maryland, Minnesota, Nebraska, Nevada, Pennsylvania, Porto Rico, Utah, Washington, West Virginia, and Wyoming. In Maryland, the limit is 9 hours per day, but the time may be extended or lessened by any city or town by a vote of the people. Maryland's law, approved March 21, 1898, provides for a 9-hour day, and the law of the same State, approved April 9, 1898, provides for a 10-hour day. The laws are reproduced in the Code of Public General Laws of the State. In New York an 8-hour law is on the statute books, but its constitutionality has been declared unconstitutional by the State Court of appeal.

In nearly all of these statutes make it a misdemeanor for an employer, contractor, or subcontractor employing labor on public works to employ more than the prescribed number of hours of labor, except in case of a sudden fire or emergency, when human life or property is in danger.

The laws usually apply to all mechanics, workmen, and labor employed or work for the State, and for any county or municipality within the State, whether such work is done directly under the supervision of the State authorities or by a contractor, subcontractor, agent. In Maryland the law applies only to the city of Baltimore. In Minnesota and West Virginia it applies to work done for the State but not for counties or municipal corporations. The Federal law applies to work performed for the United States Government and in the District of Columbia.

LEGISLATION RELATING TO HOURS OF LABOR.

Legislation.	U. S. Ala. Ariz. Ark. Cal. Colo. Conn. Del. D. C. Fla. Ga. Hawaii. Idaho. Ill. Ind. Iowa. Kans. Ky. La. Me. Md. Mass. Mich. Minn. Miss. Mo. Mont. Nebr. Nev. N. H. N. J. N. Mex. N. Y. N. C. N. Dak. Ohio. Okla. Oreg. Pa. P. R. R. I. S. C. S. Dak. Tenn. Tex. Utah. Vt. Va. Wash. W. Va. Wis. Wyo.
Defining a working day, in absence of contract, to be—	
Eight hours	
Ten hours	
Declining a day's work on public highways to be—	
Eight hours	
Ten hours	
Restricting the working day on public works to—	
Eight hours	
Nine hours	
Restricting hours of labor of male adult employees of	
Steam railways	
Street railways	
Mines, smelting and refining works, etc.	
Cotton and woollen mills	
Bakeries	
Brick-yards	
Pharmacies	
Restricting hours of labor of—	
Women	
Children	
Recognizing, in some form, an eight-hour day	



HOURS OF LABOR IN CERTAIN OCCUPATIONS.

These laws are mostly penal in character and usually apply to occupations in which, on account of their dangerous character, the fatigue occasioned by long hours of labor would jeopardize the lives of the employees or of the public; to insanitary occupations in which long hours of labor are injurious to the health of the employees or to occupations in which there has been a tendency to require an unreasonable length of service per day. The occupations for which such special legislation has been enacted are those of employees on street and steam railways, in mines and other underground workings, smelting and refining works, bakeries, brickyards, and cotton and woolen mills.

Steam railroads.

The States of Arkansas, Colorado, Florida, Georgia, Indiana, Michigan, Minnesota, Nebraska, New York, Ohio, and Texas, and the Territory of Arizona have laws limiting the hours of labor on steam railways. These laws take the form of prescribing the number of hours of rest that must be allowed conductors, engineers, firemen, and other train men on railroads, exceptions being generally made in cases of extraordinary emergencies. In Colorado and Georgia 10 hours' rest must be permitted after 16 and 13 hours of continuous service, respectively. In Arizona and Minnesota the period of rest is 9 hours. In all the other States it is 8 hours. In Florida the prescribed period of rest must be granted after 13 hours of continuous service; in Minnesota after 14 hours; in Ohio after 15 hours; in Arizona, Arkansas, Indiana, and Texas after 16 hours; in Nebraska after 18 hours, and in Michigan and New York after 24 hours.

In New York 10 hours constitute a legal day's labor in the operation of steam railways, extra compensation being required for overtime. This provision does not apply where the mileage system of running trains is in operation.

Street railways.

Laws regulating the hours of labor of street railway employees are in force in California, Louisiana, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, Rhode Island, South Carolina, and Washington. In some cases the limitation of the hours of labor applies only to conductors, gripmen, motormen, and drivers, while in others it applies to all street railway employees. In Louisiana, Massachusetts, New York, Rhode Island, and Washington the hours are limited to 10 per day, while in the other States the limitation is placed at 12 hours per day. The laws usually provide that extra time for extra compensation may be worked in times of extraordinary emergencies, Massachusetts and Rhode Island permitting exceptions to be

the State of Rhode Island by an amendment to the law which permits extra time to be made for longer hours, but no extra time is to be made for longer hours of labor may be made.

Mining and other underground work.

The States of Colorado, Maryland, Missouri, Montana, Nevada, Utah, and Wyoming, and the Territory of Arizona have laws regulating the hours of labor in mines. Of these all but Maryland prohibit employment for more than 8 hours per day. In Maryland the period for employment in and about mines is declared to be 10 hours per day, but workmen may contract for a greater number of hours. In the other States a violation of the provisions restricting the hours of labor is punishable by a fine or imprisonment.

In Colorado, Missouri, Montana, Nevada, and Utah the law applies to miners and other underground workers and to persons employed in establishments for the reduction and refining of metals; in Arizona and Maryland to persons employed in mines and other underground workings, and in Wyoming to miners and laborers in coal mines only.

Cotton and woolen mills.

The States of Georgia, Maryland, and South Carolina have laws limiting the hours of labor of employees in these industries. Georgia and South Carolina place the limitation at 11 hours per day or 66 hours per week. Extra time may be worked to make up lost time caused by accidents or unavoidable circumstances, in Georgia not to exceed ten days, and in South Carolina not to exceed 70 hours in any one year. In Maryland the statute places the limit at 10 hours per day but provides that male employees over 21 years of age may contract to work by the hour for any time agreed upon. In Georgia and South Carolina the law applies to all employees of cotton and woolen manufacturing establishments except engineers, firemen, watchmen, mechanics, teamsters, yard employees, and the clerical force; in Maryland it applies to all employees of corporations or companies engaged in the manufacture of cotton and woolen yarns, fabrics, or domestics of any kind.

Bakeries.

The States of New Jersey and New York have enacted laws limiting the hours of labor of all employees in bakeries to 10 per day or 60 per week. In Pennsylvania the number of days of labor in bakeries is limited to 6 per week.

Other occupations.

The State of New York has enacted statutes limiting the hours of labor to 10 per day in brickyards, but permitting employees to contract for longer hours; and limiting the hours of pharmacists or drug clerks employed in pharmacies to 70 hours per week.

HOURS OF LABOR OF WOMEN AND CHILDREN.

The following States and Territories have enacted laws limiting the hours of labor of women: Colorado, Connecticut, Louisiana, Maine, Maryland, Massachusetts, Nebraska, New Hampshire, New Jersey, New York, North Dakota, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Virginia, Washington, and Wisconsin. Laws limiting the hours of labor of children have been enacted in Alabama, Arkansas, California, Colorado, Connecticut, Georgia, Illinois, Indiana, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Porto Rico, Rhode Island, South Dakota, Vermont, Virginia, and Wisconsin. These laws are considered in the chapters on woman labor and child labor, respectively.

SUNDAY LABOR.

All States and Territories except Arizona, California, Idaho, Nevada, and the Philippine Islands have laws prohibiting the employment of labor on Sundays. In California, however, it is a misdemeanor for any employer to cause his employees to work more than six days in seven except in cases of emergency.

The Sunday labor laws usually make it a misdemeanor for persons either to labor themselves or to compel or permit their apprentices, servants, etc., to labor on the first day of the week. Exceptions are made in the case of household duties or works of necessity or charity. These exceptions are sometimes expressed in general terms and sometimes specified in detail. The excepted labor is usually that required in the sale of drugs, medicines, surgical appliances, milk, ice, soda water, newspapers, the letting of horses and carriages, undertakers' work, and railway transportation. In Colorado and Montana barbering only is prohibited on Sunday, while in Alaska barbering is included among the excepted occupations.

A number of States make special provisions for the running of railway cars on Sunday, such as specifying certain hours during which they may run, permitting the transportation of perishable goods, fruit, milk, etc., or leaving the regulation of the running of railway cars on Sunday to the discretion of the railroad commissioners.

Nearly all the Sunday labor laws make exceptions in the case of members of religious societies by whom any other than the first of the week is observed as a Sabbath, provided they refrain from labor on that day.

EMPLOYMENT OF WOMEN.

Much of the legislation enacted for the protection of women employees (see chart) is similar to that for child labor. In many cases the same provision of law applies to both women and children. It is especially true in the case of legislation concerning hours of labor and employment in mines and barrooms. The existing statutes concerning female labor may be grouped as follows: (1) Statutes prohibiting the employment of women in certain occupations, as in mining, underground workings, and smelting and refining works, in barrooms, and in operating dangerous machinery or cleaning machinery while in motion; (2) statutes limiting the hours of labor; (3) statutes prohibiting or restricting night work; (4) statutes requiring seats for female employees; (5) statutes requiring separate toilet facilities for female employees; (6) legislation not included in the above groups.

EMPLOYMENT IN CERTAIN OCCUPATIONS.

Nine States and 1 Territory have laws forbidding the employment of women in selling or handling intoxicating drinks or working in places where they are sold or handled, namely, Alaska, Iowa, Louisiana, Maryland, Michigan, Missouri, New Hampshire, New York, Vermont, and Washington. These laws differ considerably in their scope. In Alaska women are forbidden to dispense intoxicating liquors; in New Hampshire and New York it is unlawful to permit any girl to sell or serve liquor, an exception being made in New York in the case of members of the family; in Louisiana they may not be employed in selling, distributing, or taking orders for intoxicants in saloons or concert halls; in Michigan females are forbidden to act as bartenders or to serve liquors, to furnish music, or to dance in a saloon or barroom where intoxicants are sold, an exception being made in the case of members of the family; in Missouri no female may be employed as a servant, bartender, waiter, dancer, or singer in a dramshop or place where spirituous liquors are sold, an exception being made in the case of members of the family; in Vermont women may not be employed on premises or in rooms in which a liquor license is obtained, exceptions being made in the case of hotels, common victual and drug stores; in Iowa and Washington the employment of females is prohibited in all places where intoxicants are sold; in Maryland where the statute applies to Baltimore city only, it is unlawful to employ females in theaters, museums, or other places of amusement for the purpose of "selling, serving, receiving orders or pay for sell-

LEGISLATION RELATING TO THE EMPLOYMENT OF WOMEN.

THE WOMENS PICTURES CO PHOTO-LITHO. WASHINGTON, D. C.

most convenient to consider child-labor legislation under the following groups: (1) Statutes fixing an absolute age limit for the employment of children in all gainful occupations or in one or more of the principal groups of industries; (2) statutes prohibiting the employment of children of school age or of illiterate children during school time or unless they have complied with certain educational requirements; (3) statutes prohibiting the employment of children in dangerous, injurious, or immoral occupations, such as selling or handling intoxicating liquors, or as rope or wire walkers, gymnasts, contortionists, street singers or musicians, mendicants, itinerant peddlers, etc.; (4) statutes prohibiting certain dangerous operations, such as running elevators, cleaning machinery in motion, or operating dangerous machinery, etc.; (5) statutes restricting the hours of labor or prohibiting night work on the part of children; (6) legislation not included in the above groups.

AGE LIMIT FOR EMPLOYMENT.

The age limit prescribed by law in the different States, under which employment is absolutely prohibited, is either 16, 14, 13, 12, or 10 years. As above stated, the law applies in some States to only one, in others to several groups of industries. In some cases an age limit is prescribed under which children can not be employed except during vacation, and in some an age limit is fixed under which persons can not be employed in certain occupations or during certain hours. The two last mentioned classes of laws are separately treated.

The age limit, prescribed by statute, under which children are not permitted to be employed, is as follows:

Sixteen years: For underground work in anthracite and bituminous mines in Pennsylvania and in all mines in Texas.

Fourteen years: For work in factories, mechanical and mercantile establishments, and mines in Illinois, Ohio, Oregon, and Washington; ⁽¹⁾ for work in factories, mechanical and mercantile establishments in Connecticut, Massachusetts, and Michigan; for work in factories or mechanical establishments and in mines and smelting works in Colorado, Indiana, Kentucky, Minnesota, New Jersey, Tennessee, and Wisconsin; in factories and mechanical establishments in Louisiana ⁽²⁾ (girls), Missouri, and New York; ⁽³⁾ in mines and smelting works in Arkansas, Idaho, Montana, South Dakota, Utah, and Wyoming; for surface work at mines in Pennsylvania.

In Washington permission may be given by a superior court judge for the employment of a child between 12 and 14 years of age at an occupation which, in his judgment, is not dangerous or injurious to the health or morals of such child, when the child's labor is necessary for its support or for the assistance of an invalid parent.

In Maryland no child under 14 years of age may be employed in a mill or factory unless it is dependent solely upon its earnings or is the only support of a widowed mother or invalid father. There is no minimum age limit prescribed in such a case.

ituous or malt liquors, wines, lager beer, or any other refreshments or merchandise."

Four States forbid the employment of women in operating or cleaning dangerous machinery while in motion. These are Connecticut, Missouri, New Jersey, New York, and West Virginia. In New York it is forbidden for females in factories to operate or use any emery, tripoli, rouge, corundum, stone, carborundum, or any abrasive or emery polishing or buffing wheel where articles of the baser metals or of iridium are manufactured. In Connecticut and Massachusetts no machinery, except steam engines in factories, may be cleaned while running by any employee if objection is made by the factory inspector.

Twelve States prohibit the employment of females in mines. These are Alabama, Arkansas, Colorado, Illinois, Indiana, Maryland, Missouri, Pennsylvania, Utah, Washington, West Virginia, and Wyoming. In Alabama and Illinois the laws forbid the employment of women in or about mines, and in Arkansas, Maryland, Missouri, and Washington they forbid women to enter the mines for the purpose of working therein. In Colorado, Indiana, and West Virginia females are forbidden to work in coal mines. In Utah the employment of women in mines or smelters and in Wyoming in coal, iron, or other dangerous mines is prohibited. In Pennsylvania women may not be employed in or about mines, and they are not permitted to be in the workings of any bituminous coal mine for the purpose of employment or for any other purpose.

HOURS OF LABOR.

In 18 States and 1 Territory a limitation has been placed upon the number of hours per day or per week that women may work in manufacturing, mechanical, or mercantile establishments. In nearly all of these States the same provisions which relate to women apply also to children.

The hours of labor of females in factories, workshops, and mechanical and mercantile establishments are limited to 8 per day in Colorado; to 10 per day or 58 per week in Massachusetts, except in retail shops during the month of December; to 10 per day or 60 per week in Connecticut and Nebraska; to 10 per day in Washington, and to 12 per day or 60 per week in Pennsylvania.

In New York the hours of labor are limited to 10 per day and 60 per week for all females in factories and for females 16 to 21 years of age in mercantile establishments, exceptions being made in the case of the latter from December 15 to January 1. In Colorado the hours of labor of women in factories, stores, or other places where the nature of their work requires them to stand are limited to 8 per day.

The hours of labor in factories, workshops, and mechanical establishments are limited to 10 per day or 55 per week in New Jersey; to

10 per day or 58 per week in Rhode Island; to 10 per day or 60 per week in Louisiana, Maine, and New Hampshire; and to 10 per day in Oregon and Virginia. In Maine women 18 years of age and over may work longer than 10 hours per day for extra pay, but not to exceed 6 hours in one week or 60 hours in any one year. In Maryland the hours of labor of females are limited to 10 per day in establishments manufacturing cotton and woolen goods.

In Wisconsin, North Dakota, Oklahoma, and South Dakota the number of hours during which women may voluntarily work is unlimited, but they may not be compelled to work in manufacturing or mechanical establishments over 8 hours per day in Wisconsin and over 10 hours per day in North Dakota, Oklahoma, and South Dakota.

In a number of the States the statutes require that a certain period of time must be allowed each day for meals.

In many of the above States the laws prescribe that where women are employed schedules must be posted showing the hours during which work is permitted. The laws usually provide that longer hours than those prescribed may occasionally be worked per day in order to make up for time lost on account of repairs, etc., or to allow for a shorter day at the end of the week, but in such cases the total time worked per week may not exceed that prescribed for a week's work.

NIGHT WORK.

Five States prohibit the employment of women at night. In Nebraska females may not be employed before 6 a. m. or after 10 p. m. in any manufacturing, mechanical, or mercantile establishment, hotel or restaurant. In New York females may not be employed in factories before 6 a. m. or after 9 p. m., and those 16 to 21 years of age may not be employed in mercantile establishments, before 7 a. m. or after 10 p. m., except on Saturdays and from December 15 to January 1. In Indiana and Massachusetts the employment of females in factories before 6 a. m. or after 10 p. m. is prohibited. The New Jersey law prescribes that the period of employment of females in manufacturing establishments shall be from 7 a. m. to 12 noon and from 1 to 6 p. m. every working day except Saturday, when it shall be from 7 a. m. to noon, an exception being made in the case of persons engaged in preserving perishable goods, in canning fruit, and in glass works.

SEATS FOR FEMALES.

Thirty-one States and the District of Columbia have laws requiring employers to provide seats for the use of female employees when they are not actively engaged in their duties. While these laws are similar purpose they differ in the extent of their application.

In California, Colorado, Connecticut, Delaware, District of Columbia, Georgia, Indiana, Louisiana, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Hampshire, New Jersey, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Virginia, Washington, West Virginia, Wisconsin, and Wyoming, and in Iowa, when practicable, seats must be provided for females in factories, workshops, and mercantile establishments. In Maryland the law regarding seats for females applies to mercantile establishments in the entire State and to factories in Baltimore only. In Alabama, Florida, Kansas, South Carolina, and Utah the statutes apply only to mercantile establishments, that of Florida requiring seats for both male and female employees.

SEPARATE TOILET FACILITIES.

Seventeen States and the District of Columbia have laws requiring employers to provide toilet facilities for the separate use of females when employed. In Delaware, Indiana, Michigan, Minnesota, Missouri, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Tennessee, West Virginia, and Wisconsin separate water-closets and dressing rooms must be provided in certain establishments. In California, District of Columbia, Iowa, Massachusetts, and Tennessee the requirements relate only to water-closets. In most States the law applies to all establishments, while in a few it applies to factories and workshops only. In some States these facilities are only required if deemed necessary by a factory inspector.

OTHER FEMALE LABOR LEGISLATION.

In Delaware it is a misdemeanor for any overseer, superintendent, foreman, or boss to use abusive, indecent, or profane language to a female employee, or to maltreat her or to expose her unnecessarily to hardship.

In Massachusetts deductions from the wages of women and children are prohibited in certain cases.

Among the other laws affecting female employees are statutes giving to married women a separate property right in their earnings. Thirty-nine States and Territories have enacted such laws. Another class of laws are those declaring that sex shall be no disqualification for any business, vocation, profession, or calling pursued by men. Such laws have been enacted in California, Illinois, and Washington.

CHILD LABOR.

Legislation relating to child labor (see chart) is so varied in character in the different States and Territories that it is difficult to classify it satisfactorily. For the purpose of the present outline it has been

Thirteen years: For work in "any factory, manufacturing or mercantile industry, laundry, workshop, renovating works, or printing office" in Pennsylvania.

Twelve years: In factories and mechanical and mercantile establishments, in California and Rhode Island; in factories and mechanical establishments and in mines and smelting works in North Carolina, North Dakota, South Carolina, (a) Virginia, and West Virginia; in factories and mechanical establishments in Louisiana (boys), Maine, New Hampshire, and Texas; in mercantile establishments, in New York; (b) in mines and smelting works in Alabama, Iowa, Kansas, Maryland, Missouri, and the organized and unorganized Territories of the United States where coal mining operations are carried on.

Ten years: In factories and mechanical and mercantile establishments in Nebraska, and in factories and mechanical establishments in Alabama, Arkansas, and Vermont. (c)

In New York no boy under 10 years and no girl under 16 years of age is permitted to sell or expose for sale newspapers in any public place in cities of the first class. All boys actually or apparently under 14 years of age must have permits and wear badges, to be obtained from the district superintendent of the board of education before being permitted to sell newspapers.

In specifying the industries to which this legislation applies it has been necessary for the purpose of comparison to arrange them into three groups, namely, (1) factories and mechanical establishments, (2) mercantile establishments, and (3) mines and smelting works. The legislation in any one State does not necessarily relate to all of the industries that may be included in one group. Thus, the first group may relate to one or more industries, such as factories, manufacturing and mechanical establishments, workshops, printing offices, etc. The second group may include all mercantile establishments, retail stores, hotels, restaurants, messenger services, etc., or only one or more of these industries. The third group may include only coal mines, or coal and metalliferous mines, or it may include all mines, smelting, and refining works.

^a In South Carolina a child under 12 years of age may be permitted by a magistrate or clerk of court to work in a textile establishment if the child's labor is necessary for its support or for the support of a widowed mother or disabled father. Children under 12 years may be employed in textile establishments during June, July, and August if they have attended school at least four months during the current school year and can read and write.

^b In New York the employment of children under 14 years of age is forbidden, but in villages of under 3,000 population children of 12 and 13 years may be employed in mercantile pursuits during vacation upon obtaining employment certificates.

^c In Alabama and Arkansas the employment of children under 12 years of age is prohibited in factories unless they are dependent upon their earnings or have dependent parents.

EMPLOYMENT DURING SCHOOL TIME.

A large number of States have, in addition to an absolute age limit, a specified age under which children can not be employed either in all or in certain industries except during vacation, unless they have attended school the year preceding as required by law, or are attending night school, or have complied with certain other prescribed conditions as to school attendance or education. This age usually corresponds to that prescribed for compulsory school attendance. Twenty-two States have laws of this character. Of these, Maine, New Jersey, Vermont, and Washington fix the age limit at 15 years, under which age persons can not be employed unless certain conditions of school attendance have been complied with. In New Jersey the law applies to employment in factories, workshops, and mines; in Washington, to employment in manufacturing, mechanical, or mercantile establishments, or by telegraph and telephone companies; in Maine, to employment in manufacturing or mechanical establishments; in Vermont, to employment in mills or factories. In Ohio employment is prohibited during the school term of children under 15 in mines and under 14 in all vocations not already included within the scope of the absolute age-limit law above mentioned.

The States of Arkansas, Colorado, Connecticut, Illinois, Louisiana, Massachusetts, Montana, Nebraska, New Hampshire, New York, North Dakota, Oregon, South Dakota, and Wisconsin fix the age limit at 14 years. Of these, Colorado, Connecticut, Illinois, Massachusetts, Montana, New York, Oregon, and Wisconsin have an absolute age limit of 14 years for certain classes of industries, as above mentioned, but the legal requirement concerning school attendance, etc., must be complied with before children under 14 years can be employed in any other class of work. In Louisiana the absolute age limit for employment in factories and workshops is 12 for boys and 14 for girls, but children of either sex under 14 years of age must have attended school at least four of the twelve months next preceding employment in factories or workshops. Of the other States, in Arkansas, New Hampshire, North Dakota, and South Dakota the 14-year age limit with regard to employment during school time applies to all occupations; in Nebraska to the manufacturing, mechanical, and mercantile industries.

In Rhode Island children under 13 years of age are prohibited from being employed in any service or business except during vacation. In Pennsylvania children under 16 years of age must show that they have attended school as required by law before they can be employed in any way.

EMPLOYMENT OF ILLITERATES.

In 20 States age limits are prescribed under which children are prohibited from being employed unless they are able to read and

write the English language. Of these States, Colorado, Connecticut, Illinois, Indiana, Kansas, Massachusetts, Michigan, Minnesota, Montana, New Hampshire, New York, Ohio, Oregon, Pennsylvania, and Washington fix the age limit at 16 years, under which illiterate children can not be employed except during vacation, unless they attend evening schools or comply with other educational requirements. In Colorado and Kansas the prohibition applies only to employment in mines; in Michigan, to employment in manufacturing establishments, hotels, and stores. In the remaining States above mentioned the prohibition applies to children under 16 years of age in all industries. In Arkansas the age limit is 16 in the case of mine employees and 14 in the case of children employed in factories.

Four States fix the minimum age of employment of illiterates at 14 years—Maryland and Missouri for employment in mines only, Texas for employment in establishments using machinery, and Vermont for employment in any industry.

DANGEROUS, INJURIOUS, OR IMMORAL OCCUPATIONS.

The laws included in this group are mostly such as are directed against the use of children as performers in circuses or theaters, in peddling or mendicant occupations, in barrooms, for immoral purposes, and in dangerous or injurious occupations generally. In the other classes of child-labor laws usually the employers alone are liable for the violations. In the laws included within this group any person having the care, custody, or control of a child and exhibiting, using, or employing the same, or selling, apprenticing, giving away, or otherwise disposing of the child for the purposes prohibited by the law, is made liable.

Thirty-two States and Territories have enacted laws which come within this group. Of these, 14 have statutes prohibiting the employment of children in selling or handling intoxicating liquors or working in places where they are sold or handled. The age limits prescribed are: All minors in Alaska, Connecticut, and Georgia; 21 years in South Dakota and Vermont; 18 years in Massachusetts; 16 years in Maryland and Texas; 15 years in Pennsylvania and West Virginia, and 14 years in Colorado, Illinois, Wisconsin, and Wyoming.

These laws differ widely in their scope and purpose. In Pennsylvania and West Virginia the law prohibits the employment of children of the age specified above for the purpose of singing, dancing, acting, or in any manner exhibiting in dance houses, concert saloons, theaters, or places of entertainment where intoxicants are sold or given away or with which any place for the sale of wines or spirituous or malt liquors is directly or indirectly connected by any passageway or entrance. In Colorado and Wyoming the prohibition applies to employment as actors or performers in concert halls or rooms where

and for children under 14 years of age, in Massachusetts.⁶⁷ Operating or assisting in operating dangerous machinery is prohibited for children under 16 years of age in New York; cleaning machinery in motion or working between the fixed and traversing parts of machinery in motion is prohibited for minors in Missouri and New Jersey; cleaning machinery in motion by males under 16 and females under 18 and operating or assisting in operating dangerous machinery on the part of children under 16 years of age is prohibited in Iowa; and operating or cleaning machinery in motion is prohibited for children under 12 years of age in Louisiana.

In New York children under 18 years of age are not permitted to be employed in any factory in operating or using any emery, tripoli, rouge, corundum, stone, carborundum, or any abrasive or emery polishing or buffing wheel where articles of the baser metals or of iridium are manufactured.

An Illinois statute specifies a long list of dangerous operations in which children under 16 years of age are not permitted to be employed. These include, among others, sewing belts, adjusting belts to machinery, oiling or cleaning machinery; operating circular or band saws, planers, sandpaper or wood-polishing machinery, emery or polishing wheels, wood turning or boring machinery, stamping machines in sheet metal, tinware, washer and nut factories, corrugating rolls, steam boilers, steam machinery, cracker machinery, wire or iron straightening machinery, rolling-mill machinery, laundry machinery; setting up pins in bowling alleys; preparing compositions in which dangerous or poisonous acids are used; manufacturing paints, colors, or white lead, etc.

The operation, management, care, or custody of elevators on the part of children is prohibited in ten States. For this purpose the age limit in Ohio is fixed at 20, and in Rhode Island at 18 years; in Massachusetts, at 18 for elevators running over 100 feet per minute, and at 16 for slower elevators; in Minnesota, at 18 for elevators running over 200 feet per minute, and at 16 for other elevators; in New York, at 18 for elevators running over 200 feet per minute, and at 15 for other elevators; in Connecticut, Illinois, Indiana, and Wisconsin the age limit is 16 years and in Pennsylvania it is 14 years. Below these ages children are not permitted to be in charge of or to operate elevators. In New York the prohibition applies only to elevators in factories, and in Rhode Island it applies to passenger elevators only. In the other States the statutes apply to all elevators.

⁶⁷ In Massachusetts no machinery, except steam engines in factories, may be cleaned while running, by either a child or an adult, if objection is made in writing by the factory inspector. Connecticut has a similar law.

HOURS OF LABOR.

Twenty-nine States and Territories have passed laws limiting the hours of labor of children. The age limit of children in this case varies from 12 to 21 years, and the hour limit ranges from 6 per day to 66 per week. In some cases the prohibition is general, in others it applies to one or more classes of industries. The following statutory limitations have been placed upon the hours per day or per week during which children may be employed in the different States:

Six hours per day, 3 in the morning and 3 in the afternoon: For children under 16 years of age in agricultural factories and manufacturing establishments in Porto Rico.

Eight hours per day: For children under 16 years of age in factories, stores, mines, or other occupations which may be deemed unhealthful or dangerous in Colorado, and for children under 18 years of age in cigar factories in Indiana. In Wisconsin children under 18 years may not be compelled to work over 8 hours per day in manufacturing establishments.

Eight hours per day or 48 hours per week: For children under 16 years of age in any gainful occupations in Illinois.

Nine hours per day: For boys under 14 and girls under 16 years of age in all occupations except agricultural and domestic service and clerks in stores in Michigan, and for children under 16 years of age in factories in New York.

Nine hours per day or 54 hours per week: For children under 18 years of age in any manufacturing or mercantile establishment or any other place of labor in California, and for children under 16 years of age in mercantile establishments, business offices, hotels, etc., in towns of 3,000 or more inhabitants in New York.

Ten hours per day: For children under 18 years of age in cotton and woolen factories in Indiana; for children under 16 years by any corporation in Maine; for children under 16 years in factories in Maryland and in mercantile establishments in Baltimore; for children under 15 years in manufacturing establishments in Vermont; for children under 14 years in all occupations except agriculture and domestic service in Minnesota, and in manufacturing establishments in Virginia, North Dakota, Oklahoma, and South Dakota. In Minnesota children under 16, and in North Dakota, Oklahoma, and South Dakota children under 18 years of age may not be compelled to work more than 10 hours in the industries mentioned.

Ten hours per day or 55 hours per week: For children under 18 years in manufacturing, mercantile, or other establishments in Ohio and in manufacturing establishments in New Jersey.

Ten hours per day or 58 hours per week: For children under years of age in Massachusetts and under 16 years in Rhode Island manufacturing establishments.

Ten hours per day or 60 hours per week: For males under 18 and females under 21 years of age in manufacturing establishments Michigan; for children under 18 years of age in manufacturing establishments, telegraph and telephone offices in Louisiana, and in manufacturing establishments in New Hampshire; for children between and 18 years of age in factories in New York, and for females between 16 and 21 years of age in mercantile establishments, business office hotels, etc., in towns of 3,000 or more inhabitants in New York except in mercantile establishments from December 15 to January for females under 18 and males under 16 years of age in manufacturing establishments in Maine; for children under 16 years of age in manufacturing and mercantile establishments in Connecticut and Indiana, and for children under 14 years of age in manufacturing establishments in Arkansas.

Ten hours per day and 6 days per week: For children under years of age in any occupation in Oregon and Wisconsin.

Twelve hours per day or 60 hours per week: For minors in manufacturing and mercantile establishments, bakeries, laundries, repairing works, and printing offices in Pennsylvania.

Sixty-six hours per week: For children under 18 years of age in North Carolina and 12 years of age in Alabama in manufacturing establishments.

From sunrise to sunset, with the customary hours for meals. For persons under 21 years of age in manufacturing establishments other than cotton and woolen mills in Georgia. The law provides that contracts for longer time are null and void, but makes no other prohibitory provision.

In a number of the above-mentioned States the statutes require that an interval of one-half or one hour during the working-day be given to children for lunch or rest. Where the hours of labor per day are limited, especially in factories, a proviso is usually made that the hours per day may be extended in order to make repairs, etc., or shorten one day of the week.

NIGHT WORK.

Eighteen States have statutory provisions prohibiting children from working at night. The hours during which work is prohibited are as follows:

For minors: Between 10 p. m. and 6 a. m. in manufacturing establishments in Massachusetts.

For children under 18 years of age: Between 6 p. m. and 7 a. m. in manufacturing establishments, and between 7 p. m. and 7 a. m.

bakeries in New Jersey; between 9 p. m. and 6 a. m. in manufacturing establishments in New York; and between 9 p. m. and 5 a. m., except during time required on Sunday for setting sponge for the next day, in bakeries in Pennsylvania.

For males under 16 and females under 21 years of age: Between 10 p. m. and 7 a. m. in mercantile establishments, except on Saturday, and from December 15 to January 1, in New York.

For males under 16 and females under 18 years of age: Between 7 p. m. and 6 a. m. in manufacturing and mercantile establishments in Ohio.

For children under 16 years of age: Between 9 p. m. and 6 a. m. in all gainful occupations in Wisconsin; between 7 p. m. and 6 a. m. in all gainful occupations in Illinois and Oregon, and, in Minnesota, in all occupations outside the family, except that children from 14 to 16 years of age may be employed in mercantile establishments on Saturdays and 10 days before Christmas until 10 p. m.; between 6 p. m. and 6 a. m. in manufacturing establishments in Michigan; between 8 p. m. and 5 a. m. in bakeries in Washington; and between 9 p. m. and 5 a. m. in bakeries in Missouri.

For children under 14 years of age: Between 7 p. m. and 6 a. m. in manufacturing and mercantile establishments in Massachusetts, and in manufacturing establishments in Arkansas; between 6 p. m. and 6 a. m. in manufacturing establishments in Texas; and between 6 p. m. and 7 a. m. in manufacturing establishments and mines in Virginia.

For children under 13 years of age: Between 7 p. m. and 6 a. m. in manufacturing establishments in Alabama.

For children under 12 years of age: Between 8 p. m. and 6 a. m. in manufacturing establishments and mines in South Carolina. They may, however, work until 9 p. m. to make up for lost time.

In New York children under 14 years of age are prohibited from selling newspapers in cities of the first class after 10 p. m.

In Georgia contracts for the employment of persons under 21 years of age between sunset and sunrise in manufacturing establishments other than cotton and woolen mills are null and void, but no other prohibitory provision is made.

OTHER CHILD LABOR LEGISLATION.

Some of the child-labor laws not included above are statutes relating to the earnings of minors, in California, Idaho, Iowa, Minnesota, Montana, New York, North Dakota, Ohio, Oklahoma, Porto Rico, South Carolina, South Dakota, Utah, and Washington; prohibiting the corporal punishment of minor employees, in Georgia; engaging minors to leave the State without the consent of their parents or guardians, in North Carolina; enticing minors from parents or guardians for the purpose of employment, in Mississippi; prohibiting the

employment of children in basements of mercantile establishments, New York; prohibiting the withholding of children's wages on account of presumed negligence, alleged incompetence, failure to comply with rules, etc., in Ohio; prohibiting compulsion of children under 16 years of age by inhumane treatment to work or study, in Porto Rico. Statutes recently enacted in Alabama and Georgia make it a misdemeanor on the ground of vagrancy, for any person able to work to fail to work, but instead to hire out his minor children and live upon the wages.

ENFORCEMENT OF CHILD LABOR LAWS.

In nearly all cases violations of child labor laws are deemed misdemeanors, and penalties are provided accordingly.

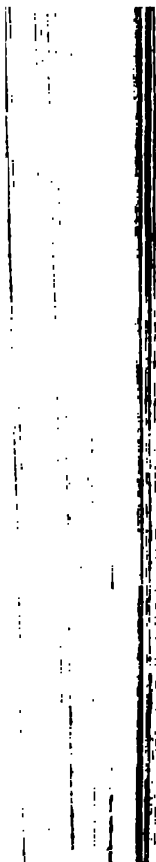
In order to insure the proper observance and enforcement of the laws concerning child labor, most of the States having such statutes have, in connection therewith, provisions requiring employers (1) obtain certificates, and, in some cases, affidavits, of parents or guardians showing that the children employed are of the required age; (2) keep a register of children employed, usually those under 16 years of age, showing the name, age, place of residence, etc., or to post such a list in a conspicuous place in the establishment where the children work. Laws limiting the hours of labor or prohibiting night work of children usually have, in addition to the above, provisions requiring employers to post conspicuously in the place where the children are employed notices showing the number of hours the children are required to work. In cases where educational requirements are provided for, employers usually must keep on file individual certificates of school authorities showing that the children have attended school as required by law. In some States factory inspectors are empowered to order the discharge of children when they have reasonable doubt their age or when they consider them physically unfit for the work required.

LICENSED OCCUPATIONS.

The Federal Government and 37 States and Territories have statutory provisions requiring the examination and licensing of persons practicing trades other than those in the class of higher professions (see chart). These occupations are those of barbers, horseshoers, elevator operators, plumbers, stationary firemen, steam engineers, telegraph operators on railroads, certain classes of mine workers, and steam and street railroad employees.

BARBERS.

Persons practicing the trade of barbering must be licensed in Connecticut, Delaware, Kansas, Kentucky, Michigan, Minnesota, Missouri, New York, North Dakota, Oregon, Rhode Island, Utah, Washington, and Wisconsin.



The statutes require barbers practicing their trade to register or obtain licenses, and provide for the appointment of boards for the examination of persons desiring to practice the trade of barbering. Some boards have power also to prescribe and enforce sanitary regulations in barber shops. The members of the board are appointed by the governor of the State, and usually serve two or three years. They must in all cases be experienced barbers, and in Kansas they must be examined by the State board of health for their knowledge of inoculable contagious diseases. In Missouri the candidates for members of the board must be recommended by certain organizations named in the act. In Minnesota one of the members must be recommended by a journeymen's union. The members in nearly all cases are bonded officers, the bonds ranging from \$500 to \$6,000.

A fee of \$5 is generally charged for an examination and certificate of practice and \$1 to \$2 per year for renewal of certificate or license. These fees are charged to defray the expenses of the board. The members usually receive a per diem of from \$3 to \$5 while in session and are allowed mileage. The boards are required to meet three or four times a year, and are generally required to make periodical reports either to the governor or to the legislature.

The usual requirements for examination for barber licenses are: Applicants in some of the States must be at least 18, in others 19, years of age, of good moral character, and free from contagious diseases. An apprenticeship of two years is required by some States while other States require three years, or the applicants must have studied for the same length of time in a school for barbers. In some States applicants may practice their trade until the examining boards meet. The boards usually have power to revoke licenses when the holders are physically or morally unfit to practice their trade. Penalties are provided in all the above-named States for practicing without a license or certificate.

While the statutes vary to some extent in the different States, they are fairly similar in their main features.

HORSESHOERS.

The laws of the States of Colorado, Maryland, Michigan, Minnesota, New York, Ohio, and Washington require horseshoers either to register or to obtain licenses or certificates entitling them to practice their trade, such licenses or certificates being issued only to qualified persons who have passed an examination before a special board. The board in all cases consists of five members, two of whom are master horseshoers, two journeymen horseshoers, and one a veterinary surgeon, all of whom are appointed by the governor for a term of years.

In New York and Ohio the statutes have general application; in Washington it applies to cities of the first, second, and third class; in

Michigan, to cities of 10,000 inhabitants or over; in Minnesota, to cities of 50,000 or over; in Colorado, to cities of 70,000 or over; in Maryland, to the city of Baltimore and a portion of Baltimore County.

MINE EMPLOYEES.

The States of Alabama, Illinois, Indiana, Iowa, Missouri, Montana, Pennsylvania, Tennessee, Utah, and Wyoming have enacted statutes requiring the examination and licensing or registration of certain classes of coal mine employees. These classes usually include mine managers, foremen or bosses, fire bosses, mine examiners, hoisting engineers, etc.

The boards which examine candidates and grant or recommend the granting of licenses or certificates consist of from three to five members, one of whom is usually a State mine inspector and the others are experienced miners and mine operators or superintendents in equal proportion. The members are appointed either by the governor, the State mine inspector, or by a district court at the instance of the State inspector, and they receive a per diem of \$4 or \$5 and traveling expenses while actually serving.

In some States two classes of certificates are given to mine bosses, one class for those who are competent to serve in mines generating gases or other explosive substances and one class to mine bosses in other coal mines. The candidates must furnish evidence of good character, must have a specified number of years of experience, and must pass an examination prescribed by the board. The fee for the examination and certificate varies in the different States from \$1 to \$5.

Missouri statutes, in addition to requiring the examination and certification of mine managers, bosses, etc., provide that all coal miners shall produce evidence of experience and qualifications satisfactory to the coal-mine inspector.

In Pennsylvania not only mine foremen and assistant mine foremen, but also all anthracite miners, must pass an examination and be registered before they can follow their vocation. Separate provisions exist and separate boards are constituted for the examination of mine bosses, etc., in bituminous mines and in anthracite mines.

OPERATORS OF ELEVATORS.

Minnesota has a statute requiring the examination and licensing of operators of passenger elevators.

PLUMBERS.

Nineteen States, the District of Columbia, and Porto Rico have laws requiring the examination, registration, and licensing of plumbers. These States are California, Colorado, Illinois, Kansas, Louisiana,

Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Hampshire, New York, Oregon, Pennsylvania, Texas, Virginia, Washington, and Wisconsin. The statutes vary in the scope of their application in the different States. In some States they apply to all cities and towns having underground sewerage systems, and in some to cities and towns of a certain class or to those having a certain population. In Maryland the law applies only to the city of Baltimore. In Massachusetts and New Hampshire it applies to cities and towns adopting its provisions by a vote of the people.

In most of the above-mentioned States every person practicing the trade of plumber, either as master or journeyman, must obtain a license or must register after passing an examination before a special board. In a few cases only the companies, firms, or individuals engaged in the business of plumbing must register, journeymen or other employees not being included in the requirement. The fee for the examination and license varies from 50 cents to \$5, being usually greater for master plumbers than for journeymen. In a number of States the license must be renewed each year, an annual license fee being charged.

The examining boards are local bodies, except in Minnesota and Maryland, where the statutes provide for State boards. They usually consist of one or more local officials whose duties relate to building and sanitation—such as health officers, city engineers, or inspectors of plumbing—and two or more practical plumbers, half of whom are masters and the other half journeymen, appointed in some States by the mayor, in others by the board of public health, etc. The functions of most boards relate merely to the examination of candidates and the issue of licenses, although in a few cases they have power also to make and enforce plumbing regulations. In some States members serve without pay, while in others they obtain a per diem compensation while actually serving. In the District of Columbia they receive \$300 per annum. In a few States they are required to give bond.

RAILROAD EMPLOYEES.

The States of Alabama, Massachusetts, and Ohio have laws requiring the examination of steam railroad employees, the examination in the two last-mentioned States being for color blindness only. These laws do not provide, however, for the official registration or licensing of such employees.

The Alabama law provides that before employing persons as train dispatchers, engineers, conductors, firemen, flagmen, brakemen, trackmen, or switchmen the railroad company must subject them to an examination for color blindness, and to a written examination respecting their moral character and reputation, sobriety, previous record, and knowledge of the rules and regulations governing the service.

The examination papers must be kept on file in the principal office of each railroad company in the State to serve as evidence of their content and of the fact that such examinations have been made. Railroad companies employing persons in such positions without the prescribed examination are liable to a fine of from \$100 to \$500.

The Massachusetts law provides that "a railroad corporation shall not employ any person or keep him in its employ in a position which requires the employee to distinguish form or color signals unless he has been examined for color blindness or other defective sight by a competent person employed by the corporation and has received a certificate that he is not disqualified for such position by color blindness or other defective sight." A railroad corporation which violates this provision is liable to a forfeit of \$100. The Ohio statute is similar to that of Massachusetts, but requires a reexamination every two years.

STATIONARY FIREMEN.

The States of Massachusetts, Montana, and New York have enacted laws requiring the examination and licensing of stationary firemen. The New York statute applies only to the city of New York, where the applicant must be a citizen of the United States, and his application must be signed by a licensed engineer who must certify that the applicant is of good character and has been employed under the instruction of a licensed engineer. The applicant is then examined by a special board appointed by the police commissioner as to his ability to operate a steam boiler. Licenses may be revoked or suspended at any time.

In Massachusetts and Montana the provisions of law concerning firemen were enacted in connection with those relating to steam engineers, the same regulations applying in both cases and the examinations being conducted by the same board. In Massachusetts two classes of licenses are issued: First, to operate any boiler or boilers; second, to have charge of and operate low-pressure heating boilers in which the pressure carried is less than 25 pounds to the square inch. In Montana the law provides that "all firemen who have charge of steam boilers as to the regulation of feed water and fuel, where the boilers are so situated as not at all times to be under the eye of the engineer in charge," are required to pass a third-class engineer's examination and procure the same kind of license.

STEAM ENGINEERS.

Laws requiring the examination and licensing of steam engineers have been enacted by the Federal Government, by the States of Alabama, Florida, Illinois, Indiana, Iowa, Maryland, Massachusetts, Minnesota, Missouri, Montana, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, and for the District of Columbia.

The provisions of the United States statute relate only to engineers on steam vessels, and appear in connection with the law concerning the inspection, etc., of steam vessels and the examination and licensing of masters, mates, pilots, etc. With regard to engineers on steam vessels it provides for the granting of different classes or grades of licenses. Applicants are examined by the inspectors as to their knowledge of steam machinery, experience as engineers, and other evidences of fitness. If found competent and trustworthy they receive licenses authorizing them to be employed for one year in the duties of the class designated in the license. Any license may be suspended, revoked, or replaced by one of a lower class, upon satisfactory proof of negligence, unskillfulness, intemperance, etc. The certificate of license is to be framed under glass and conspicuously placed. Violation of the provisions of the statute subjects the person so violating to a fine of \$100 and revocation of license.

In New Hampshire and New Jersey the law likewise relates only to steamboat engineers. In Alabama the law relates only to locomotive engineers, and is considered in connection with the examination and licensing of railway employees. In Pennsylvania three classes of licenses are provided for—one for operating stationary steam boilers and engines, one for operating portable steam boilers and engines, and another for engineers on board vessels operated by machinery. In Illinois, Indiana, and Iowa the statutes relate to hoisting engineers in mines, and are therefore considered in connection with the examination and licensing of mine employees.

In the remaining States the statutes require the licensing of stationary engineers either generally throughout the State or only in cities of a certain class or population. In Maryland the law relates to Baltimore only, and in New York to New York City.

The examinations are mostly conducted and the licenses granted by local authorities, consisting either of a board of examiners or of the local boiler inspectors. In Maryland, Minnesota, Montana, and Ohio, however, the examiners are appointed by the governors. In Missouri "any incorporated association of qualified local steam engineers" is "authorized to grant certificates of qualification to all persons who duly pass an examination before a committee of examiners, to be appointed by such corporation," and such certificates are regarded as *prima facie* evidence of the qualifications of the persons to whom they are issued.

In some States engineers are graded according to their experience and ability, the license specifying the maximum horsepower of the engine the licensee is permitted to operate. A fee is required in all cases for the examination and the issuance of a license. This fee for original license ranges from \$1 to \$7.50 in the different States, and sometimes varies with the grade of the engineer. The certificates or licenses are

usually limited to one year, when they must be renewed, at a small cost, generally \$1. Provision is generally made for the revocation of licenses when the holders are incompetent, negligent, intemperate, etc.

STREET RAILWAY EMPLOYEES.

New York has the following statutory provision for the examination of street-railway employees:

Any railroad corporation may employ any inhabitant of the State of the age of twenty-one years, not addicted to the use of intoxicating liquors, as a car driver, conductor, motorman, or gripman, or in any other capacity, if fit and competent therefor. All applicants for positions as motormen or gripmen on any street surface railroad in this State shall be subjected to a thorough examination by the officers of the corporation as to their habits, physical ability, and intelligence. If this examination is satisfactory, the applicant shall be placed in the shop or power house, where he can be made familiar with the power and machinery he is about to control. He shall then be placed on a car with an instructor, and when the latter is satisfied as to the applicant's capability for the position of motorman or gripman, he shall so certify to the officers of the company, and, if appointed, the applicant shall first serve on the lines of least travel. Any violation of the provisions of this section shall be a misdemeanor.

TELEGRAPH OPERATORS ON RAILROADS.

Georgia has a statute requiring the examination of telegraph operators on railroads. It provides that telegraph operators who receive and transmit dispatches governing the movement of trains must be at least 18 years of age, have at least one year's experience as telegraph operators, and must have stood a thorough examination before the railroad superintendent or train master, and received certificates of competency, a record of which must be kept on file by the company.

PAYMENT OF WAGES.

Statutes concerning the wages of employees (see chart) may be considered in two classes, namely, those which relate to the employment contract, such as the time of payment of employees, payments in scrip or other evidences of indebtedness, fines, discounts, notice of reduction of wages, etc., and legislation granting certain privileges or affording special protection to working people with respect to their wages, such as exempting wages from attachment, preferring wage claims in assignments, etc.

TIME OF PAYMENT OF EMPLOYEES.

The legislation under this head provides for either weekly, fortnightly, or monthly wage payments. In Arizona, California, Maryland, Tennessee, and Virginia the wage payments are required to be made at least once a month; in Indiana, Iowa, Kentucky, Maine, New

LEGISLATION RELATING TO PAYMENT OF WAGES.

[illegible]

COERCION IN TRADING.

Coercion of employees to trade at a particular place, by threatening their discharge, requiring them to sign agreements, holding out inducements, etc., is prohibited in Arkansas, Colorado, Florida, Indiana, Iowa, Kentucky, Maryland, Massachusetts, Nevada, New Jersey, New Mexico, Ohio, Tennessee, Texas, Utah, Washington, and West Virginia. In Massachusetts, Montana, Nevada, and Utah coercion to board at a particular place, and in Michigan coercion to insure in certain companies or associations, is prohibited. In Tennessee it is unlawful for an employer to interfere with the right of an employee to choose a family physician.

DEDUCTIONS FROM WAGES.

Twenty States have enacted laws prohibiting employers from making deductions from wages due employees, either on account of fines, breakage of machinery, discounts for prepayments, medical attendance, relief funds, or for other purposes.

In Indiana it is unlawful for an employer to assess a fine on any pretext against an employee and retain the same from his wages, or to exact without first obtaining written consent any portion of an employee's wages for the maintenance of any hospital, reading room, library, gymnasium, or restaurant. In Massachusetts weavers' wages are not to be affected by fines or otherwise except for imperfections in their work. In California, Colorado, Illinois, Iowa, Kansas, Kentucky, Minnesota, Missouri, Ohio, Porto Rico, South Dakota, and Utah it is unlawful for employers to fine or withhold wages from employees on account of taking time to vote at elections. In Illinois it is unlawful for any corporation to withhold any portion of the wages of employees for the purpose of paying the same at some future time as a present or gratuity for satisfactory service, or on condition that the employees shall remain in its employ until some date designated by the corporation. In Ohio it is unlawful for an employer without an express contract with his employee to deduct or retain any part of the wages of the latter for wares, tools, or machinery destroyed or damaged. In Colorado it is prohibited for an employer to charge employees interest, discount, etc., for money advanced on wages when pay days are at unreasonably long intervals. In Connecticut it is unlawful for an employer to charge a discount for making prepayment of wages, or to make deductions on account of an agreement made with an employee requiring him to give notice before leaving; also for a contractor, foreman, superintendent, or supervisor of labor to exact or receive any pay or fee from an employee for furnishing employment. In Hawaii it is unlawful for employers to collect fines from employees, unless by judgment of a court, or "to deduct and retain any part or portion of

any wages due and payable to any laborer or employee, or to collect any store account, offset, or counter claim without the written consent of such laborer or employee or by action in court." In Allegany County, Md., corporations must pay wages in cash without deductions or offsets. In Minnesota, refusal to pay wages with intent to secure a discount or falsely denying the amount and validity of a claim for wages is regarded as extortion. In Maryland^a it is unlawful for a railroad company, and in New Jersey for any corporation, to withhold any part of the wages of its employees for the benefit of a relief fund or association. In Tennessee it is unlawful for an employer without the consent of the employees to deduct any part of the wages for paying the salary of a company doctor, and in Nevada for employers to require employees to pay hospital fees where no convenient, comfortable, and well-equipped hospital is maintained.

In California it is a felony for an employer of laborers on public works to take, keep, or receive any part of the wages due such employee from the State or municipal corporation. In Michigan it is unlawful for employers to deduct any part of the wages of employees without their full and free consent.

NOTICE OF REDUCTION OF WAGES.

A few States have laws requiring employers to give previous notice of reduction of wages. In Indiana 24 hours' written notice is required in case any changes are made in the current rates of wages. In Missouri companies and corporations must give 30 days' notice of reduction of wages, the law specifying the manner in which notice is to be given. In Texas railroad companies are required to give 30 days' notice of reduction of wages, the law prescribing the form of notice. The Federal law of June 1, 1898, concerning arbitration of labor disputes has a provision that whenever railroads are in the hands of receivers no reduction of wages is to be made without the authority of the court therefor, and in case of such reduction not less than 20 days' notice must be given to the employees, the notice to be posted upon all bulletin boards.

WAGES ADVANCED BY EMPLOYERS.

Six States have enacted statutes concerning employers' advances. In Alabama it is considered larceny for an employee to make a written contract to perform service and receive pay without performing the service, if done with intent to injure or defraud the employer. It is a misdemeanor in Louisiana for employees to leave the service of an employer without repaying advance payments made by the latter.

^a In Maryland, under certain conditions mentioned on pages 1473 and 1474, advances may be made by employers from the wages of employees for accident ins

in Florida, Georgia, Michigan, and South Carolina to receive, with intent to defraud, advances or transportation under an employment contract and then to refuse to render the service contracted for, the law in Florida applying only to seamen and sponge fishermen. In Minnesota accepting advances, transportation, etc., with intent to defraud is a misdemeanor.

MINIMUM WAGE RATES.

Four States have statutes in force fixing a minimum wage rate for labor on public works. In California and Nebraska the minimum rate is fixed at \$2 per day, the law in Nebraska requiring the work to be performed by union labor. An Indiana statute fixes the rate of wages on public highways at 15 cents per hour for a laborer and at 25 cents per hour for a man and team. A Delaware statute provides that the daily wages paid for a legal day's work to laborers, workmen, or mechanics in the employ of the municipal corporation of the city of Wilmington or of any contractor or subcontractor for public work for that city shall not be less than the prevailing rate for a day's work in the same trade or occupation in the locality where the work is done.

In California street-railway employees can recover for overtime if working more than 12 hours per day, a minimum rate of 30 cents per hour being fixed by statute for such overtime.

PAYMENT OF DISCHARGED EMPLOYEES.

A number of States have passed laws concerning the payment of discharged employees. In Arizona, Arkansas, Colorado, and South Carolina wages due employees must be paid when discharged; in Kansas and Massachusetts wages of discharged employees must be paid on the following regular pay day. In Louisiana, if an employee is discharged before the expiration of the term of the contract, the employer must pay for the full term, and if the employee leaves before that time he forfeits his pay for the term and must return any advances that may have been made. In California, Montana, North Dakota, and South Dakota if an employee is discharged for good cause he forfeits all pay due since the last pay day under the contract, but if the employee leaves for good cause he is entitled to compensation for the time worked. In Georgia the employee when wrongfully discharged before the end of his term may either sue immediately for any special injury from the breach of the contract or for the value of the services rendered, or he may wait till the end of the term and sue for and recover his entire wages. In Porto Rico if a master dismisses a servant before the expiration of his term, without sufficient cause, he must pay the wages due and the wages for 15 days additional. In New Jersey, Pennsylvania, and Rhode Island the law provides that

if an employer contracts with an employee that the latter shall forfeit any part of his pay in case he leaves without a specified notice, he must give the same notice to the employee before discharging him, and in default must pay wages for the same length of time as that for which wages would have been forfeited if the employee had left without notice. This requirement does not apply in the case of misconduct or incapacity on the part of the employee.

PAYMENT IN BARROOMS.

In California it is a misdemeanor for employers to pay their employees in barrooms or other places where intoxicants are sold.

EXEMPTION OF WAGES.

Of the legislation affording special protection to working people with regard to their wages, the statutes exempting wages from attachment by garnishment, trustee process, or execution are the most common, nearly all the States and Territories having laws of this character.

The exemptions in the different States and Territories are as follows:

In Florida, Georgia, Louisiana, Pennsylvania, Texas, and Vermont wage debts of any amount.

In Alabama and Virginia current wages not exceeding \$25 and \$30 per month, respectively, and in Illinois \$15 per week.

In Colorado, Delaware, and Hawaii from 50 to 90 per cent of the current weekly or monthly wages.

In Alaska, Arizona, Arkansas, California, Idaho, Iowa, Kansas, Montana, New Mexico, New York, North Dakota, Oklahoma, South Carolina, and South Dakota the entire wage for a specified period, usually 30, 60, or 90 days.

In the District of Columbia and in Maine, Minnesota, Nebraska, Nevada, Ohio, Oregon, Utah, Washington, Wisconsin, and Wyoming wages for a specified period, but not exceeding a certain amount or proportion.

In Connecticut, Indiana, Kentucky, Maryland, Massachusetts, Michigan, Mississippi, Missouri, New Hampshire, Rhode Island, and Tennessee a specified amount varying from \$10 to \$200 without regard to the period of time.

In some cases the exemption applies only when the debtor is a householder or the head of a family and the family is either wholly or partly dependent upon his wages for support. In other cases the amount of wages exempted is merely reduced in the case of persons not heads of families. Provision is made in some of the States exempting the wages of a wife or minor children from attachment for the debts of the husband or father.

Other provisions of law concerning the exemption of wages from attachment adopted in various States reduce the amount exempted in cases where the debts were contracted for necessities of life, exclude debts for board or necessities of life or debts of nonresidents or of persons leaving the State from the exemption, and prohibit the sending of claims out of the State for the purpose of defeating the exemption laws.

In some cases the wage exemption applies only to wages of laborers and mechanics and in others also to salaries of clerks and officials.

ASSIGNMENT OF WAGES.

In Connecticut, Maine, New Hampshire, and Rhode Island assignments of wages are not valid unless recorded in the office of the town clerk or recorder of deeds. In California, Indiana, Massachusetts, New York, and Pennsylvania assignments for the purpose of relieving employers of the legal obligations with regard to weekly, fortnightly, or monthly payments are invalid. In Montana a statute provides that no assignment of any wages due or to become due to an employee for labor shall be made to any person, firm, company, corporation, or trust employing such labor, or to any officer of or other person interested in such firm, company, etc. In Tennessee, Virginia, and West Virginia the statutes provide that claims for wages may be assigned by employees. In Tennessee the assignments of unearned wages by an employee is invalid unless with the consent of the employer. In New Jersey it is unlawful to receive or contract to receive more than the legal rate of interest upon the amount of unearned wages assigned.

SECURITY OF WAGES.

Besides the provisions for mechanics' liens found in every State and Territory, a considerable number of the States have enacted legislation with the view of securing to employees wages due them for their labor.

California, Indiana, Kansas, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New York, North Dakota, Oregon, Tennessee, Washington, and Wisconsin, as well as the Federal Government, have enacted statutes requiring contractors for public works to give bond for the payment of labor and material furnished. In some cases these laws relate only to city and other local improvements and in others to all public works. In New York the law applies to contractors on canal work. A time limit is usually prescribed within which action must be brought on the bond.

The Federal law relates only to work undertaken for the Federal Government and for the District of Columbia. In California, as already mentioned, it is a felony for contractors to withhold wages due

laborers on public works. In Minnesota the wages of employees of insolvent contractors on county work may be paid by the county commissioners.

In Colorado, while no bond is expressly required, the officers of cities, towns, etc., are required to retain from the money due contractors amounts sufficient to satisfy the claims of laborers for wages. In New Jersey and New York laborers and mechanics have a lien on money appropriated for the payment of contractors on public works. The constitution of Texas provides that the legislature shall pass laws to protect laborers on public works against the failure of contractors and subcontractors to pay their current wages when due, and to make corporations, companies, or individuals for whom work is done responsible for the payment.

Connecticut, Kansas, Maine, Minnesota, and Vermont have enacted statutes requiring railroad companies to exact bonds from contractors for the payment of wages of employees on construction work, or, in the absence of such bonds, holding them liable for the wages due from contractors. In Massachusetts, Missouri, New Jersey, New York, North Carolina, and Wisconsin the statutes do not require a bond, but make the railroad companies liable for wages due employees by contractors. In Wisconsin railroad companies are also liable for wages due from predecessors. In Michigan a railroad company may withhold from contractors an amount equal to the wages due employees until paid, and employees may then collect from the railroad company. If the claim is disputed the railroad company may hold the amount until the matter is adjudicated. The statute does not, however, make the railroad companies liable for the wage debts of the contractors. In Georgia the amounts due employees by a railroad company for wages earned constitute a lien upon the company's property superior in dignity to the lien of any mortgage or contract lien.

In Baltimore, Md., stevedores must be licensed and must give bond for the payment of wages of employees. In North Carolina owners are liable for the wages due employees by stevedores, and may refuse settlement with stevedores until wages are paid.

In Louisiana building contractors must give bond for the payment of labor and material, otherwise owners are liable. In South Carolina employees and subcontractors have a first lien on money received for the erection of buildings, but the owners are not liable.

In Virginia no assignment of debts due a contractor for construction work on buildings, railroads, etc., is valid unless wage claims are satisfied.

In Arkansas specific liens are reserved upon so much of the produce raised and articles produced or manufactured by laborers during their contract as will secure all moneys and the value of all supplies.

furnished them by the employers and all wages or shares due the laborers.

In Idaho all persons, companies, or corporations engaged in mining, building, or construction work, and employing labor are required to publish and file with a district recorder a sworn statement showing the name of the owner, of the persons, etc., undertaking the work, the address of their principal office, the conditions under which the prosecution of the work is contemplated, the time and place of wage payments, and a statement of the mortgages and liens upon the property.

A number of States have enacted laws making stockholders individually responsible for the wages due employees for services rendered to the corporation. In the States of Indiana, Massachusetts, Michigan, New Jersey, New York, North Carolina, North Dakota, South Dakota, and Tennessee, and in Oklahoma Territory, each stockholder is jointly and severally liable to any extent, in Pennsylvania and Wisconsin to an amount equal to the value of the stock owned, and in South Dakota to the amount unpaid on the stock.

In Michigan, New York, and South Dakota the law applies to all corporations; in South Carolina it applies only to railroad corporations, and in Wisconsin to all but railroad companies. In New Jersey it applies to gas and navigation companies, in Oklahoma to mining and manufacturing corporations, and in Indiana, Massachusetts, North Dakota, Pennsylvania, South Dakota, and Tennessee, to two or more specified industries.

PREFERENCE OF WAGE DEBTS.

Nearly every State in the Union has enacted statutes giving preference to the claims of employees for services rendered over those of other creditors in assignments, receiverships, etc., or in the settlement of estates of deceased employers.

The Federal bankruptcy law gives debts for wages due to workmen, clerk, or servants earned within three months before commencement of proceedings and not exceeding \$300 to each claimant, priority over all other debts after payment of taxes, cost of preserving the estate, the filing fees paid by creditors in involuntary cases, and cost of administration.

The following States make statutory provision for the preference of claims for wages over other claims in assignments or insolvency: Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Idaho, Illinois, Indiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Pennsylvania, Rhode Island, Utah, Vermont, Washington, Wisconsin, and Wyoming.

Special provision is made for the preference of wage claims in receiverships in the following States: Alabama, Arkansas, Connect-

icut, Delaware, Georgia, Illinois, Indiana, Iowa, Kansas, Maryland, Missouri, New Jersey, Oregon, Texas, Utah, and Wisconsin.

In the administration of estates of deceased employees wages are preferred by statute after payment of taxes, widows' and orphans' allowances, and expenses of administration, funeral, and sickness, in the following States: Alabama, Arkansas, California, Delaware, Idaho, Illinois, Indiana, Kansas, Louisiana, Massachusetts, Minnesota, Missouri, Montana, Nevada, Ohio, Oregon, Pennsylvania, South Dakota, Utah, Washington, and Wyoming, and in the District of Alaska.

The following States provide for the preference of wage claims in executions, attachments, or similar writs: Arkansas, California, Delaware, Idaho, Michigan, Missouri, Montana, Nebraska, Nevada, New Jersey, Oregon, Pennsylvania, South Dakota, Utah, and Washington.

In nearly all cases the statutes giving preference to wage claims fix a limit upon the amount of the wages preferred and upon the period prior to the death, assignment, etc., during which the preferred amount was earned. These limitations differ in the different States, the amount varying from \$50 to \$500 and the time limit from one month to one year.

SUITS FOR WAGES.

The following States and the Territory of Oklahoma have provisions of law granting special privileges to employees in suits brought for the recovery of money due for wages: Colorado, Idaho, Illinois, Iowa, Kansas, Louisiana, Michigan, Missouri, New York, New Jersey, North Dakota, Ohio, Oregon, Pennsylvania, Texas, Utah, West Virginia, Washington, Wisconsin, and Wyoming.

The most common provisions of this kind are those which allow the plaintiffs in suits for wages a limited amount to be recovered for attorneys' fees. Such provisions of law exist in Colorado, Idaho, Illinois, Indiana, Iowa, Kansas, Michigan, New Jersey, Ohio, Oklahoma, Oregon, Texas, Utah, and Washington. In Iowa, Michigan, North Dakota, Ohio, Pennsylvania, and Wisconsin the defendants are not entitled to a stay of execution, under the statutes, when the judgment is for wages. Other provisions giving employees special privileges in suits for wages are such as dispense with court fees or security for costs, permit judgment for additional costs in certain cases, give suits for wages preference in the order of trial, permit joint suits and joint appeals, etc.

EMPLOYERS' LIABILITY.

The legislation enacted in the various States with regard to the liability of employers for injuries sustained by employees may be grouped as follows: (1) Statutes declaratory of the common-law doctrine with regard to the liability of employers, their duty toward employees, etc.; (2) statutes modifying the fellow-servants doctrine

by adopting the theory (a) that all superior employees are vice-principals as regards their subordinates, and (b) that coservice is not a bar to an action for injuries caused by the negligence of an employee in a different department; (3) statutes by which employers have been, either entirely or in regard to certain classes of injuries, deprived of the protection afforded by the defense of common employment; (4) statutes holding employers liable in damages for injuries to employees caused by reason of employers' failure to comply with specific provisions of law concerning condition of ways, machinery, appliances, and plants, hours of labor, or other statutory regulations for the protection and safety of employees; (5) statutes concerning the right to recover damages for injuries resulting in death; (6) statutes concerning accident insurance, relief associations, etc.

COMMON-LAW LIABILITY.

The States of California, Montana, North Dakota, and South Dakota have enacted statutes stating the common-law doctrine by declaring employers liable for injuries sustained by employees in consequence of the discharge of duty, or in obedience to the employers' directions, or on account of the want of ordinary care on the part of the employers, exceptions being made in the case of losses suffered in consequence of the ordinary risks of business or of the negligence of fellow-servants.

Statutes passed in Connecticut and in Minnesota define the term "vice-principal," and require employers to provide their employees with a safe place to work and to furnish reasonably safe tools, machinery, etc.

A Georgia statute provides that "except in the case of railroad companies, the master is not liable to one servant for injuries arising from the negligence or misconduct of other servants about the same business."

MODIFICATION OF FELLOW-SERVANTS DOCTRINE.

Statutes providing that persons who are in a position to give orders or directions, or who have supervision over work, are vice principals, have been enacted in Arkansas, Connecticut, Indiana, Massachusetts, Minnesota, Mississippi, Missouri, Montana, New York, Ohio, Oregon, Porto Rico, South Carolina, Texas, Utah, and Virginia.

Statutes providing that coservice is not a bar to an action for injuries caused by the negligence of an employee in a different department have been enacted in Arkansas, Indiana, Massachusetts, Mississippi, Missouri, Montana, Ohio, Oregon, Porto Rico, South Carolina, Texas, Utah, and Virginia.

These statutes in most States apply only to the railroad service.

ABROGATION OF FELLOW-SERVANTS DOCTRINE.

Statutes by which employers have been either entirely or in regard to certain classes of injuries deprived of the protection afforded by the defense of common employment have been enacted in 13 States and Territories. In Colorado the statute applies to all industries, and thus practically abolishes the fellow-servants doctrine. In Arizona, where the statute applies to all corporations, there is a proviso that the corporation must have had previous notice of the incompetence, carelessness, or negligence of the fellow-servant in order to become liable. In Maryland the statute applies to steam and street railroads, mines, quarries, excavations, etc. In Florida, Georgia, Iowa, Kansas, Minnesota, Missouri, New Mexico, North Carolina, North Dakota, and Wisconsin these statutes abrogate the fellow-servants doctrine in the railway service only.

DEFECTIVE WAYS, MACHINERY, ETC.

Twenty-eight States and Territories have statutes and one State has a constitutional provision holding employers liable in damages for injuries sustained by employees by reason of the failure of employers to comply with specific provisions of law concerning condition of ways, machinery, appliances, plants, etc., hours of labor, or other statutory regulations designed for the protection and safety of employees. In Indiana, Kansas, Massachusetts, Mississippi, New Mexico, New York, Ohio, and Porto Rico these statutes apply to industries generally; in Arkansas and North Carolina, to railroads and mines; in Iowa, Minnesota, Nebraska, Vermont, Virginia, and Wisconsin, to railroads only; in California, Colorado, Illinois, Maryland, Michigan, Missouri, Pennsylvania, and Utah, the statutes, and in Wyoming a constitutional provision, apply to mines only; in Washington the statutes apply to sawmills; in the District of Columbia, New Jersey, Pennsylvania, and Rhode Island employers are liable for damages to their employees for injuries due to failure to provide fire escapes on factories, workshops, or other places of work; in Rhode Island, for failure to provide proper protection on elevator shafts, and in Illinois for failure to provide guards on thrashing machines, cornshellers, or other machines run by horse power. A Federal statute provides that any employee of a railroad company engaged in interstate commerce who may be injured by any locomotive, car, or train by reason of the company's failure to comply with the provision of the law requiring the placing of safety couplers and power brakes on engines and cars, "shall not be deemed thereby to have assumed the risk thereby occasioned, although continuing in the employment of such carrier after the unlawful use of such locomotive, car, or train had been brought to his knowledge."

INJURIES RESULTING IN DEATH.

Nearly all the States and Territories have enacted laws changing either wholly or in part the common-law rule that no action for damages caused by the killing of a human being can be maintained, namely: Alabama, Arizona, California, Colorado, Delaware, District of Columbia, Georgia, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oregon, Porto Rico, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Virginia, Washington, West Virginia, Wisconsin, Wyoming. These statutes usually give the widows, dependents, executors, etc., the same right to recover damages as if death had not resulted from the accident. In a number of these States the statutes fix the maximum amount that may be recovered in such cases. In Utah the constitution provides that the right of action to recover damages for injuries resulting in death shall never be abrogated, and the amount recoverable shall not be subject to any statutory limitation.

CONTRACTS RESTRICTING LIABILITY.

The following States have included in their statutes regulating the liability of the employer, provisions to the effect that no contract restricting the liability imposed by the statutes or waiving the benefit of the same shall be legal and binding: Arkansas, Colorado, Florida, Georgia, Indiana, Iowa, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, Montana, New Mexico, North Carolina, North Dakota, Ohio, Oregon, South Carolina, Texas, Virginia, Wisconsin. In Wyoming this is provided for in the constitution.

RELIEF AND INSURANCE INSTITUTIONS.

The States of Indiana, Iowa, Maryland, Massachusetts, Michigan, Montana, New York, Ohio, Pennsylvania, and South Carolina, and also Porto Rico, have statutory provisions concerning relief or insurance funds or associations for the compensation of injured workmen. These laws differ greatly in their scope and purpose.

An Ohio statute prohibits railroad corporations from compelling employees to join relief organizations or entering into contracts with the employees whereby the latter waive or surrender their right to damages. In Michigan it is unlawful for a company or corporation to require employees to take out life or accident policies in any particular insurance organization, and all contracts requiring or stipulating that employees should procure such policies are void. Employees may, however, contribute toward voluntary mutual benefit funds and have the amount of the contributions deducted from their wages. In Iowa,

Montana, and South Carolina statutes provide that contracts of insurance, relief, benefit, or indemnity in case of injury or death between employees and employers in the railway service, or the acceptance of such relief, etc., do not constitute a bar or defense to a cause of action for injury. The Indiana statute provides, however, that a settlement may be made after the injury. In Indiana the law declaring contracts releasing employers from liability void does not apply to voluntary relief departments or associations organized for the purpose of insuring employees. The South Carolina law authorizes manufacturing companies to become members of mutual companies or associations for insurance against accidents to their employees. Railroad companies having relief departments for which members are required or permitted to pay dues are required to pay persons entitled to the benefits the amounts agreed upon, the law providing that the acceptance of such relief does not estop an employee or his representatives from recovering damages for injury or death caused by the negligence of the employer.

In Massachusetts, New York, and Porto Rico the statutes provide that employers who contribute toward insurance funds or relief societies or have insured employees in insurance companies may prove in mitigation of the damages recoverable by an employee, such proportion of the pecuniary benefit received by the employee from such fund or society as the contribution of the employer bears to the whole contribution to the same.

A Massachusetts statute expressly authorizes the organization of railway relief associations and permits steam and street railway companies to associate themselves with such organizations. Such associations must report their membership, financial operations, etc., to the board of railroad commissioners, who have authority to inspect their books and papers. The by-laws of such associations must be approved by the railroad commissioners before they can conduct their operations.

The Maryland statute differs from all other laws passed in this country in that it provides for a form of cooperative insurance under the immediate control of the State. It provides that any corporation, partnership, or individual engaged in operating any coal or clay mine, quarry, steam or street railroad in Maryland, and any incorporated town, city, or county engaged in constructing a sewer, excavation, or other physical structure, or the contractor for such town, city, or county, shall be liable for damages flowing from an injury to or the accidental death of an employee or servant. If the injury was caused by the joint negligence of the employer or his servant on the one hand and the injured or deceased person on the other, then the employer is liable for one-half the damages sustained by the injury or death.

The employers above mentioned may, however, be relieved of this

liability if they pay the following annual sums for each employee into the hands of the State insurance commissioner: Operators of coal or clay mining or quarrying, \$1.80; operators of steam railways, \$3; operators of street or trolley railways, 60 cents; cities, towns, counties, or contractors, such sum as the insurance commissioner may deem necessary. The employers, etc., may deduct a sum not exceeding one-half the amount payable to the insurance commissioner from the wages of the employees. The insurance commissioner may extend the benefits of this insurance scheme to other occupations than those indicated. The only indemnity provided for under this scheme is the payment, in case of death by accident as above mentioned, of \$1,000 to the administrator or executor of the deceased or to the widow, husband, or children. The insurance commissioner has the custody of the funds and is required to invest them in safe securities.

Any party subject to the provisions of this act who is making better provision, either by way of payment in case of death, injury, sickness, or old age, or all combined, than he would be obliged to do under this scheme may be absolutely released by the commissioner from the liability imposed by virtue of this act, but the legal effect of the act may be revived whenever the party fails to continue the scheme or system on account of which the order of release was granted.

BOYCOTTING, BLACKLISTING, INTIMIDATION, ETC.

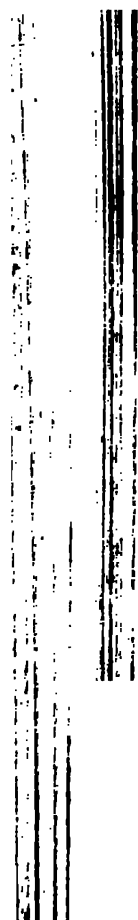
Under this head are considered statutes relating to boycotting, blacklisting, conspiring against workingmen, intimidation, interference with employment, and other legislation specially directed against certain acts of employers or employees in connection with labor disputes, but not including general statutes concerning conspiracies and unlawful assemblies (see chart). Some of these statutes are considered in the chapters on railway labor and labor organizations.

BOYCOTTING.

Five States—namely, Alabama, Colorado, Illinois, Indiana, and Texas—have statutes applying expressly to boycotting. Acts usually committed by persons engaged in boycotting are, however, prohibited in other States and are considered either under the head of conspiracy, intimidation, or interference with employment. The Alabama statute makes it unlawful to print or circulate any notice of boycott, stickers, dodgers, or unfair lists publishing or declaring that a boycott or ban exists or has existed or is contemplated against any person, firm, or corporation doing a lawful business, or publishing the name of any judicial officer or other public official upon any blacklist, unfair list, etc., because of any lawful act or decision of such official. In Colorado a proviso to the statute legalizing labor organizations prohibits

LEGISLATION RELATING TO BOYCOTTING, BLACKLISTING, CONSPIRACY, INTIMIDATION, ETC.

Legislation.		U. S.
Boycotting.	Ala.	
	Ariz.	
	Ark.	
	Cal.	
	Colo.	
Blacklisting.	Conn.	
	Del.	
	D. C.	
	Fla.	
	Ga.	
Intimidation of employees.	Hawaii.	
	Idaho.	
	Ill.	
	Ind.	
	Iowa.	
Interference with employment.	Kans.	
	Ky.	
	La.	
	Me.	
	Md.	
Conspiracy against workmen.	Mass.	
	Mich.	
	Minn.	
	Miss.	
	Mo.	
	Mont.	
	Nebr.	
	Nev.	
	N. H.	
	N. J.	
	N. Mex.	
	N. Y.	
	N. C.	
	N. Dak.	
	Ohio.	
	Okla.	
	Oreg.	
	Pa.	
	P. R.	
	R. I.	
	S. C.	
	S. Dak.	
	Tenn.	
	Tex.	
	Utah.	
	Vt.	
	Va.	
	Wash.	
	W. Va.	
	Wis.	
	Wyo.	



"two or more persons by threats of either bodily or financial injury or by any display of force to prevent or intimidate any other person from continuing in such employment as he may see fit or to boycott or intimidate any employer of labor." In Illinois the statute declares it a conspiracy for two or more persons to conspire or agree together, or for the officers or executive committee of any society or organization or corporation to issue any circular or edict to its members or any other persons, societies, organizations, or corporations for the purpose of establishing a boycott or blacklist, or to post or distribute any notice with fraudulent or malicious intent to injure the person, character, business, or employment or property of another.

The Indiana statute prohibits the making of contracts, agreements, or arrangements by persons, firms, or associations of persons, directly or indirectly, to prevent wholesale or retail dealers or manufacturers from selling supplies to dealers, mechanics, or artisans; and any person, firm, or association entering into such a contract, agreement, or arrangement or refusing to sell articles of trade, supplies, or material to a dealer, mechanic, or artisan for the reason that the latter is not a member of a combination or association of persons is guilty, under the statute, of conspiracy against trade and is liable to a fine of from \$50 to \$2,000 and imprisonment in jail, and the party injured may maintain a suit for the recovery of damages.

In Texas it is unlawful, as being a conspiracy in restraint of trade, for two or more persons, firms, corporations, or associations of persons to agree "to boycott or threaten to refuse to buy from or sell to any person, firm, corporation, or association of persons for buying from or selling to any other person, firm, corporation, or association of persons." For violations of this law a fine of \$50 for each day of violation and imprisonment from 1 to 10 years in the penitentiary may be imposed.

BLACKLISTING.

Blacklisting is prohibited by statute in Alabama, Colorado, Connecticut, Florida, Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Montana, Nevada, North Dakota, Oklahoma, Oregon, Texas, Utah, Virginia, Washington, and Wisconsin. In the case of common carriers engaged in interstate commerce the Federal law on the arbitration of labor disputes makes it a misdemeanor for an employer to attempt or conspire to prevent an employee from obtaining employment after quitting his service.

In some States the statutes simply make the act of blacklisting a misdemeanor, and in others they also give the injured person a right of action for damages. In a number of cases employers are required to give employees, when requested, statements of the reasons for their discharge.

INTIMIDATION OF EMPLOYEES.

Acts of employers or employees, either alone or in combination with others, for the purpose of preventing persons by force, threats of violence, menace, or intimidation from doing work, furnishing materials, or engaging in lawful business, or acts preventing or attempting to prevent the peaceable exercise of a lawful industry, business, or calling by any person is made a misdemeanor by statutory enactment in Alabama, Connecticut, Georgia, Illinois, Kentucky, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New York, North Dakota, Oklahoma, Oregon, Porto Rico, Rhode Island, South Dakota, Texas, Vermont, and Washington. In many cases these statutes may be construed as prohibiting boycotting, although the word "boycott" does not appear in the act. In Louisiana the act concerns only employees on steamboats, and in Washington employees in mines. In the other States the acts relate to employers and employees generally.

INTERFERENCE WITH EMPLOYMENT.

Under this head have been grouped statutes prohibiting persons from committing acts of interference with others while the latter are engaged in lawful occupations. Some of these provisions of law are so closely interwoven with those concerning intimidation, boycotting, etc., that it is difficult to determine in which group they should be classified.

The States which have laws that may be included in this group are Alabama, Arkansas, Connecticut, Delaware, Georgia, Illinois, Kansas, Kentucky, Louisiana, Minnesota, Mississippi, New Jersey, New York, North Dakota, Oregon, Pennsylvania, Rhode Island, West Virginia, and Wisconsin. In Delaware, Kentucky, Mississippi, and New Jersey these laws relate only to railways and in West Virginia to mines. In Georgia the statute is directed against the interference of labor organizations with the right of apprenticeship.

The statutes against interference with employment which have a general application differ greatly in their form and scope. The New York law, which relates to interference generally, provides as follows:

A person who, with a view to compel another person to do or abstain from doing an act which such other person has a legal right to do or to abstain from doing, wrongfully or unlawfully -

1. Uses violence or inflicts injury upon such other person or his family or a member thereof or upon his property or threatens such violence or injury; or
 2. Deprives any such person of any tool, implement, or clothing or hinders him in the use thereof; or
 3. Uses or attempts the intimidation of such person by threats or force,
- Is guilty of a misdemeanor.

CONSPIRACY AGAINST WORKINGMEN.

The conspiracy laws of Florida, Georgia, Illinois, Kansas, Minnesota, Mississippi, New York, and North Dakota have provisions concerning conspiracy against workingmen which in some cases closely resemble the laws considered above.

A number of States have laws declaring that combinations of workingmen for peaceably securing higher wages, etc., are not conspiracies. These are considered in the chapter on labor organizations.

LABOR ORGANIZATIONS.

Nearly all States have enacted laws concerning trade unions and other labor organizations (see chart). This legislation consists of statutes providing for legalizing labor organizations, exempting trade unions from general statutes regulating corporations, protecting employees as members of labor organizations, prohibiting the counterfeiting of and the unauthorized use of union labels or trade-marks, prohibiting fraudulent use of labor badges and credentials, and requiring public work to be done by union labor.

LEGALIZATION OF LABOR ORGANIZATIONS.

The right of combination and peaceable assembly is recognized throughout the United States. Trade unions and other labor organizations for mutual benefit, improvement, and protection are nowhere in the United States regarded as unlawful, and workingmen may in any State peaceably combine for the purpose of endeavoring to secure higher wages, shorter hours of labor, fair treatment, etc. A few States, however, namely, California, Colorado, Maryland, Minnesota, New Jersey, New York, Pennsylvania, Texas, and West Virginia, and the Territory of Porto Rico, have special statutory laws declaring such combinations, or certain acts of such combinations, lawful.

Special statutory provisions for the incorporation of trade unions and other labor organizations have been enacted by the Federal Government and by the States of Iowa, Louisiana, Maryland, Massachusetts, Michigan, Nebraska, Ohio, Texas, and Wyoming. In some cases these are special acts relating solely to labor organizations, and in others labor organizations are included in a list of religious, scientific, cooperative, or other institutions for the incorporation of which special statutes have been enacted. In Nebraska and Wyoming the provisions concerning the incorporation of labor organizations relate solely to assemblies of the Knights of Labor. In Michigan special provision is made for the incorporation of assemblies of the Knights of Labor and of associations subordinate to the American Federation of

Labor. In New Jersey and New York laws have been enacted authorizing joint corporations of labor associations to build halls, maintain libraries, etc. A Federal statute enacted June 29, 1886, provides for the incorporation of national trade unions. Its provisions are as follows:

SECTION 1. The term "national trade union," in the meaning of this act, shall signify any association of working people having two or more branches in the States or Territories of the United States for the purpose of aiding its members to become more skillful and efficient workers, the promotion of their general intelligence, the elevation of their character, the regulation of their wages and their hours and conditions of labor, the protection of their individual rights in the prosecution of their trade or trades, the raising of funds for the benefit of sick, disabled, or unemployed members, or the families of deceased members, or for such other object or objects for which working people may lawfully combine, having in view their mutual protection or benefit.

SEC. 2. National trade unions shall, upon filing their articles of incorporation in the office of the recorder of the District of Columbia, become a corporation under the technical name by which said national trade union desires to be known to the trade; and shall have the right to sue and be sued, to implead and be impleaded, to grant and receive, in its corporate or technical name, property, real, personal, and mixed, and to use said property, and the proceeds and income thereof, for the objects of said corporation as in its charter defined: *Provided*, That each union may hold only so much real estate as may be required for the immediate purposes of its incorporation.

SEC. 3. An incorporated national trade union shall have power to make and establish such constitution, rules, and by-laws as it may deem proper to carry out its lawful objects, and the same to alter, amend, add to, or repeal at pleasure.

SEC. 4. An incorporated national trade union shall have power to define the duties and powers of all its officers, and prescribe their mode of election and term of office, to establish branches and subunions in any Territory of the United States.

SEC. 5. The headquarters of an incorporated national trade union shall be located in the District of Columbia.

TRADE UNIONS EXCEPTED FROM GENERAL STATUTES REGULATING CORPORATIONS.

The statutes from which trade unions are excepted are of two kinds -- antitrust acts and those relating to insurance organizations.

In Louisiana, Michigan, Minnesota, Montana, Nebraska, North Carolina, and Wisconsin provision is made in the antitrust acts exempting labor organizations from their application.

The States of Kansas, Massachusetts, and Mississippi have provisions of law excepting labor organizations from the operation of statutes governing insurance companies and associations.

PROTECTION OF MEMBERS OF LABOR ORGANIZATIONS.

Laws prohibiting employers from discharging persons on account of membership in labor organizations, or compelling persons to agree not to become members of labor organizations as a condition of securing employment or continuing in their employ, are in force in California, Colorado, Connecticut, Idaho, Indiana, Massachusetts, Minnesota, Nevada, New Jersey, New York, Ohio, Oregon, Pennsylvania, Porto Rico, and Wisconsin.

LEGISLATION RELATING TO LABOR ORGANIZATIONS.

Legislation.		
Legalizing labor organizations:		U. S.
Declaring labor combinations lawful.....		Ala.
Providing for incorporation of labor organizations.....		Alaska
Exempting labor organizations from statutes regulating—		Ariz.
Treats and industrial combinations.....		Ark.
Insurance corporations and associations.....		Cal.
Protecting members of labor organizations.....		Colo.
Concerning union labels, credentials, or insignia:		Conn.
Protecting union label or trademark.....		Dal.
Regulating union label on public printing.....		D.C.
Prohibiting issue or use of false credentials, etc.....		Fla.
Prohibiting unauthorized wearing of insignia.....		Ga.
		Havett.
		Igho.
		Ill.
		Ind.
		Iowa.
		Kans.
		Ky.
		La.
		Me.
		Md.
		Mass.
		Mich.
		Minn.
		Miss.
		Mo.
		Mont.
		Neb.
		Nev.
		N. H.
		N. J.
		N. Mex.
		N. Y.
		N. C.
		N. Dak.
		Ohio.
		Okl.
		Oreg.
		Pa.
		P. R.
		R.I.
		S. C.
		S. Dak.
		Tenn.
		Tex.
		Utah.
		Vt.
		Va.
		Wash.
		W. Va.
		Wis.
		Wyo.



The Federal statute concerning the arbitration of labor disputes between common carriers engaged in interstate commerce and their employees has a provision making it a misdemeanor for any employer subject to the provisions of that act to "require any employee or any person seeking employment, as a condition of such employment, to enter into an agreement, either written or verbal, not to become or remain a member of any labor corporation, association, or organization," or to threaten any employee with loss of employment, or unjustly to discriminate against any employee because of his membership in such a labor corporation, association, or organization.

In Pennsylvania the law relates only to corporations; but in all the other States mentioned the prohibition includes all employers of labor.

CREDENTIALS, ETC., OF LABOR ORGANIZATIONS.

Laws prohibiting the issue or use of false credentials or cards of membership or the unauthorized wearing of insignia, distinctive ribbons, buttons, or rosettes of labor organizations have been enacted in Georgia, Massachusetts, New York, Pennsylvania, and Wisconsin.

In Georgia and Wisconsin it is a misdemeanor to make, alter, forge, or counterfeit a card or receipt of dues purporting to be issued by an association of railway employees, any letter or certificate purporting to be given by an employer to an employee, or to make use of such a card, receipt, or certificate with the intention to injure, deceive, or defraud. In Massachusetts and Pennsylvania the law prohibits the unauthorized wearing of insignia, badges, or buttons of labor organizations. In New York it is a misdemeanor for a person fraudulently to represent himself to be a member of a labor organization or to attempt to gain admission to a convention or meeting of representatives of labor organizations by means of fraudulent credentials.

UNION LABELS OR TRADE-MARKS.

Forty States and Territories have adopted laws allowing trade unions, federations, and other labor organizations to adopt labels or trade-marks to be used to designate the products of the labor of their members, and prohibiting the counterfeiting or the use of such labels or trade-marks by unauthorized persons. These are Alabama, Arizona, California, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming. These laws usually provide that the label or trade-mark be registered, and a copy or facsimile of the same be filed with the secretary of state,

and a certificate of registration be issued to the union or organization. The counterfeiting or unauthorized use of the union label is usually made a misdemeanor. In nearly all the above-mentioned States provision is made by which the manufacture, use, display, or sale of counterfeits or imitations of union labels or trade-marks may be enjoined and resulting damages awarded the complaining union or association.

UNION LABOR ON PUBLIC WORKS.

The State of Nebraska has a statute requiring that in any city of from 25,000 to 40,000 inhabitants, where work is performed upon the streets, sewers, boulevards, or in parks, etc., by or for such city, the work shall be done by union labor and at the rate of \$2 per day. The States of Montana and Nevada have statutes requiring the union label to be affixed to public printing.

BOARDS OF ARBITRATION AND CONCILIATION.

Twenty-two States and the Federal Government have enacted laws concerning the creation of boards of arbitration and conciliation for the settlement of disputes between employers and employees. Wyoming has a constitutional provision directing the legislature to establish courts of arbitration for labor disputes, but no legislation to this effect has been enacted.

The Federal statute of June 1, 1898, which is now in force, applies only to common carriers engaged in interstate commerce and their employees. This act provides that the chairman of the Interstate Commerce Commission and the U. S. Commissioner of Labor shall, upon request of either party to a controversy concerning wages, hours of labor, or conditions of employment interrupting or threatening to interrupt business, endeavor with all practicable expedition to bring about an amicable settlement.

If their efforts at mediation and conciliation fail, they shall immediately endeavor to have the matter adjusted by arbitration. For this purpose a special board consisting of three members is provided. The members are to be selected as follows: One shall be named by the interested employer—one by the labor organization or organizations to which the employees belong; or if a majority of the employees do not belong to any such organization, they shall select by majority vote a committee from their own number, which shall select one member of the board. These two shall, within five days after their first meeting, select the third member. Upon their failure so to select the third member, the two Commissioners mentioned above shall select the third member.

Questions at issue must be submitted in writing, signed by both parties, who shall agree that pending the arbitration the status exist-

ing immediately prior to the dispute shall not be changed. Hearing **shall** be begun within ten days, and the award shall be rendered within **thirty** days from the date of the appointment of the third arbitrator.

Every agreement of arbitration must be signed by the employer and the representatives of the employees, and be acknowledged before a notary public, and stipulate as follows: That the award shall be final and conclusive, except in cases of apparent errors of law, and binding upon both parties; that each party will faithfully execute the award; that no person shall be compelled to labor against his will; that dissatisfied employees will not, by reason of such dissatisfaction, quit the service of the employer during the three months next following the award without giving thirty days' notice of their intentions, nor shall the employer, within the same period, for like reason, dismiss any employee without like notice; that the award shall remain in force for a term of one year, and until the expiration of that period no question shall be resubmitted for arbitration. In case the employees are not members of a labor organization, the award is binding only on the individuals signing the agreement.

The award is filed in the clerk's office of the circuit court of the United States for the district wherein the controversy arises, and at the expiration of ten days from filing, judgment shall be entered thereon, unless either party shall, within the ten days, file exceptions to the award for errors of law apparent upon the record, in which case judgment is entered at the expiration of ten days after such exceptions are finally disposed of by the courts. The parties may agree upon the portion of the award set aside by the court, which agreement is entered as a part of the award.

The arbitrators have power to administer oaths, sign subpoenas, send for books, papers, documents, contracts, etc., material to rendering a just award, and may invoke the aid of the United States courts to compel the attendance of witnesses.

The boards provided for in the different States are of three kinds, namely, permanent State boards, regular local boards, and special local boards appointed for particular disputes.

The following States have made provision for the creation of permanent State boards: California, Colorado, Connecticut, Idaho, Illinois, Indiana, Louisiana, Massachusetts, Michigan, Minnesota, Missouri, Montana, New Jersey, New York, Ohio, Utah, and Wisconsin. A number of these, as shown below, also provide that special local boards may be constituted for the settlement of particular disputes. Pennsylvania provides for the licensing of special and regular local boards, and Kansas for regular local boards. In Maryland, Texas, and Washington statutes provide only for the creation of special local boards for particular disputes as they occur.

PERMANENT STATE BOARDS.

These boards in all but one State are appointed by the governor and usually confirmed by the senate. In New York the commissioner of labor, who is appointed by the governor, and his two assistants, who are appointed by himself, constitute the board. In all but two States the State boards consist of three members, the exceptions being in Louisiana and New Jersey, where the law provides for five members. In Indiana, however, two additional members may be added when desired by the parties to a dispute.

It is usually provided that one member of the board shall be an employee or a member of a labor organization, one an employer of labor, and the third a person to be recommended by the other two, unless they fail to agree upon a choice. In Connecticut, Idaho, Illinois, Indiana, and Utah it is provided that at least two political parties should be represented on the board. In Michigan no limitation is placed upon the choice of the governor.

The members of the board are appointed for one year in California; for two years in Colorado, Connecticut, Idaho, Minnesota, Montana, and Wisconsin; for three years in Illinois, Massachusetts, Michigan, Missouri, New Jersey, and Ohio, and for four years in Indiana, Louisiana, and Utah. In New York the commissioner of labor is appointed for four years, and his assistants hold office at his pleasure. The members are in nearly all cases required to take the oath of office before entering upon their duties.

The State boards have power to issue subpoenas, to require the production of books and papers, and administer oaths to witnesses. The secretary or clerk, who in some cases is a member of the board and in others an outsider appointed by the board, keeps a record of the proceedings. The boards are generally required to establish rules of procedure, which in some States must be approved by the governor or the attorney-general. Reports must be rendered to the governor or legislature, annually in the States of Colorado, Connecticut, Illinois, Massachusetts, Michigan, Montana, New York, Ohio, and Utah, and biennially in Louisiana, Minnesota, Missouri, and Wisconsin.

The laws usually require that whenever the members of the board obtain knowledge that a strike or lockout is threatened or is taking place, involving not less than a certain number of persons, usually 25 employees, they must communicate with the parties and attempt to mediate or to induce arbitration. In performing this duty the boards generally have power to inquire into the causes of the controversies, subpoena witnesses, require the production of records, etc., as when a case is submitted for arbitration. In a few of the States it is made the duty of the mayor, village trustees, or the probate judge of a town

or locality to notify the board whenever a strike or lockout occurs or is imminent. In Maryland, where only special local boards are provided for cases to be submitted to arbitration, the board of public works has power to demand and receive a statement of the cause from each party to a controversy between a corporation and its employees, and may propose arbitration. If arbitration is refused, the board is required to investigate and report to the general assembly. A State board sits as a court of arbitration only when requested by either or both parties to a controversy. The application in such case must be made in writing and must contain a statement of the case at issue. When both parties agree to submit the case to arbitration they must usually promise to continue in business or at work until a decision is rendered, if within a certain time, usually ten days after investigation. The decision of the board sitting as a court of arbitration is made public and recorded, and the laws usually provide that it is binding upon both parties, either for a specified or for an indefinite period. In Colorado, Idaho, Illinois, and Indiana, the finding may be enforced by contempt process or as a judgment or statutory award, and in Ohio to the extent stipulated in the joint application made by the parties. In Missouri the finding is final and conclusive if previously agreed or application is mutual, unless exceptions are filed within five days, and failure to comply is made a misdemeanor, subjecting the offender to a fine of from \$50 to \$100. In the other States no provisions are specified in the law for the enforcement of the findings of permanent State boards of arbitration.

LOCAL BOARDS.

Two kinds of local boards are provided for by the laws of the different States, namely, regular and special boards. The former, which are found in Pennsylvania and Kansas, are boards licensed for individual counties or judicial districts wherever a requisite number of both employers and employees petition for the same. They are licensed for one year and must consist of not less than two employers and two employees. In Kansas an umpire is appointed by the court, and in Pennsylvania he must be the mutual choice of all representatives constituting the tribunal. In their important features the Pennsylvania and Kansas laws are similar. Pennsylvania also has a law providing for the organization of special arbitration tribunals and authorizing courts of common pleas to have such courts constituted when requested by one or both of the parties to a dispute.

The arbitration laws of California, Colorado, Massachusetts, Minnesota, Montana, New Jersey, New York, Ohio, and Wisconsin provide, in addition to the State boards, for the licensing of special local boards for the arbitration of particular disputes when desired by the

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The conspiracy laws of Florida, Georgia, Illinois, Kansas, Minnesota, Mississippi, New York, and North Dakota have provisions concerning conspiracy against workingmen which in some cases closely resemble the laws considered above.

A number of States have laws declaring that combinations of workingmen for peaceably securing higher wages, etc., are not conspiracies. These are considered in the chapter on labor organizations.

LABOR ORGANIZATIONS.

Nearly all States have enacted laws concerning trade unions and other labor organizations (see chart). This legislation consists of statutes providing for legalizing labor organizations, exempting trade unions from general statutes regulating corporations, protecting employees as members of labor organizations, prohibiting the counterfeiting of and the unauthorized use of union labels or trade-marks, prohibiting fraudulent use of labor badges and credentials, and requiring public work to be done by union labor.

LEGALIZATION OF LABOR ORGANIZATIONS.

The right of combination and peaceable assembly is recognized throughout the United States. Trade unions and other labor organizations for mutual benefit, improvement, and protection are nowhere in the United States regarded as unlawful, and workingmen may in any State peaceably combine for the purpose of endeavoring to secure higher wages, shorter hours of labor, fair treatment, etc. A few States, however, namely, California, Colorado, Maryland, Minnesota, New Jersey, New York, Pennsylvania, Texas, and West Virginia, and the Territory of Porto Rico, have special statutory laws declaring such combinations, or certain acts of such combinations, lawful.

Special statutory provisions for the incorporation of trade unions and other labor organizations have been enacted by the Federal Government and by the States of Iowa, Louisiana, Maryland, Massachusetts, Michigan, Nebraska, Ohio, Texas, and Wyoming. In some cases these are special acts relating solely to labor organizations, and in others labor organizations are included in a list of religious, scientific, cooperative, or other institutions for the incorporation of which special statutes have been enacted. In Nebraska and Wyoming the provisions concerning the incorporation of labor organizations relate solely to assemblies of the Knights of Labor. In Michigan special provision is made for the incorporation of assemblies of the Knights of Labor and of associations subordinate to the American Federation of

LEGISLATION RELATING TO LABOR ORGANIZATIONS.

Legislation.	U. S. Ala. Alaska Ariz. Ark. Cal. Colo. Conn. Del. D. C. Fla. Ga. Hawaii Idaho. Ill. Ind. Iowa. Kans. Ky. La. Me. Md. Mass. Mich. Minn. Miss. Mo. Mont. Nebr. Nev. N. H. N. J. N. Mex. N. Y. N. C. N. Dak. Ohio. Okla. Oreg. Pa. P. R. R. I. S. C. S. Dak. Tenn. Tex. Utah. Vt. Va. Wash. W. Va. Wis. Wyo.
Legalizing labor organizations:	
Declaring labor combinations lawful:	
Providing for incorporation of labor organizations:	
Exempting labor organizations from statutes regulating—	
Trusts and industrial combinations.....	
Insurance corporations and associations.....	
Protecting members of labor organizations.....	
Concerning union labels, credentials, or insignia:	
Protecting union label or trademark.....	
Requiring union label on public printing.....	
Prohibiting issue or use of false credentials, etc.....	
Prohibiting unauthorized wearing of insignia.....	

intelligence offices, employment bureaus, immigrant agencies, etc., conducted for profit. In some cases these laws merely require persons conducting such offices to pay a license fee, while in others more or less stringent regulations are prescribed. The most important regulations are those which exact bonds from the proprietors of these establishments, require the registers and other books to be open to the inspection of the proper public officers, fix a maximum charge for services rendered, require the refunding of fees if positions are not secured within a specified time, and make it a misdemeanor to give false information, to advertise fraudulently, or to send females to places of bad repute.

LABOR CONDITIONS IN HAWAII.

Under the provisions of the act of April 30, 1900, "to provide a government for the Territory of Hawaii" two reports have been made by the Bureau of Labor relative to the commercial, industrial, social, educational, and sanitary condition of the laboring classes of the Territory. The first of these reports relates to the year 1901 and the second to the year 1902. The next report will be for the year 1905 and thereafter reports will be made every 5 years.

While the data comprised in these reports are not to any considerable extent susceptible of graphic presentation, a few of the most important facts relative to population, race, occupations, wages, etc., were selected as the basis for charts for the exhibit of the Bureau at the Louisiana Purchase Exposition. No effort will be made here to present any of the general facts shown in these reports as the later one, published in the Bulletin of the Bureau for July, 1903 (No. 47), is still in print and may be had on application to the Commissioner of Labor. It is considered sufficient to present simply a list of the charts exhibited, the figures on which they are based, and reproductions of certain of the most important of the charts constructed.

Following is given a list of these charts, indication being given in each case of the table which contains the data upon which it is based:

Per cent of population of each race in 1900 (Table 1).

Population by race, 1853 to 1900 (Table 2).

Per cent of total persons engaged in gainful occupations of each race in 1900 (Table 3).

Per cent of total persons engaged in gainful occupations in each general occupation group in 1900 (Table 3).

Persons engaged in gainful occupations, by race, in 1900 (Table 3).

Persons engaged in mechanical occupations, by race, in 1890, 1893, and 1900 (Table 4).

Persons engaged in certain mechanical occupations, by race, in 1900 (Table 5).

Persons employed on sugar plantations, by race, 1892 to 1902 (Table 6).

Average daily wages of sugar-plantation labor, 1890 to 1902 (Table 7).

Persons employed in skilled occupations on sugar plantations, by classified daily wages and race, 1902 (Table 8).

Of these charts reproductions are given herewith. The data which form the basis of the 10 charts on exhibit are given in the tables following.

TABLE 6.—PERSONS EMPLOYED ON SUGAR PLANTATIONS, BY RACE, 1892 TO 1902.

Race.	1892	1894	1895	1896	1897	1898	1899	1901	1902
Hawaiians.....	1,717	1,903	1,584	1,615	1,497	1,482	1,326	1,470	1,493
Chinese.....	2,617	2,786	3,847	6,299	8,111	7,200	5,979	4,976	44,326
Japanese.....	13,019	13,881	11,584	12,893	12,068	16,786	25,644	27,587	830,640
Portuguese.....	2,526	2,177	2,499	2,268	2,218	2,064	2,183	2,417	2,689
Caucasians.....	516	563	473	600	675	979	806	991	1,032
All others.....	141	181	133	115	61	68	79	2,196	2,062
Total.....	20,596	21,294	20,120	23,790	24,653	28,579	35,967	39,567	42,242

^a Including a few Japanese not separately reported.

^b Not including a few Japanese not separately reported, and included in Chinese.

^c This is not the correct total of the items; the figures given, however, are as shown in the Hawaiian Annual.

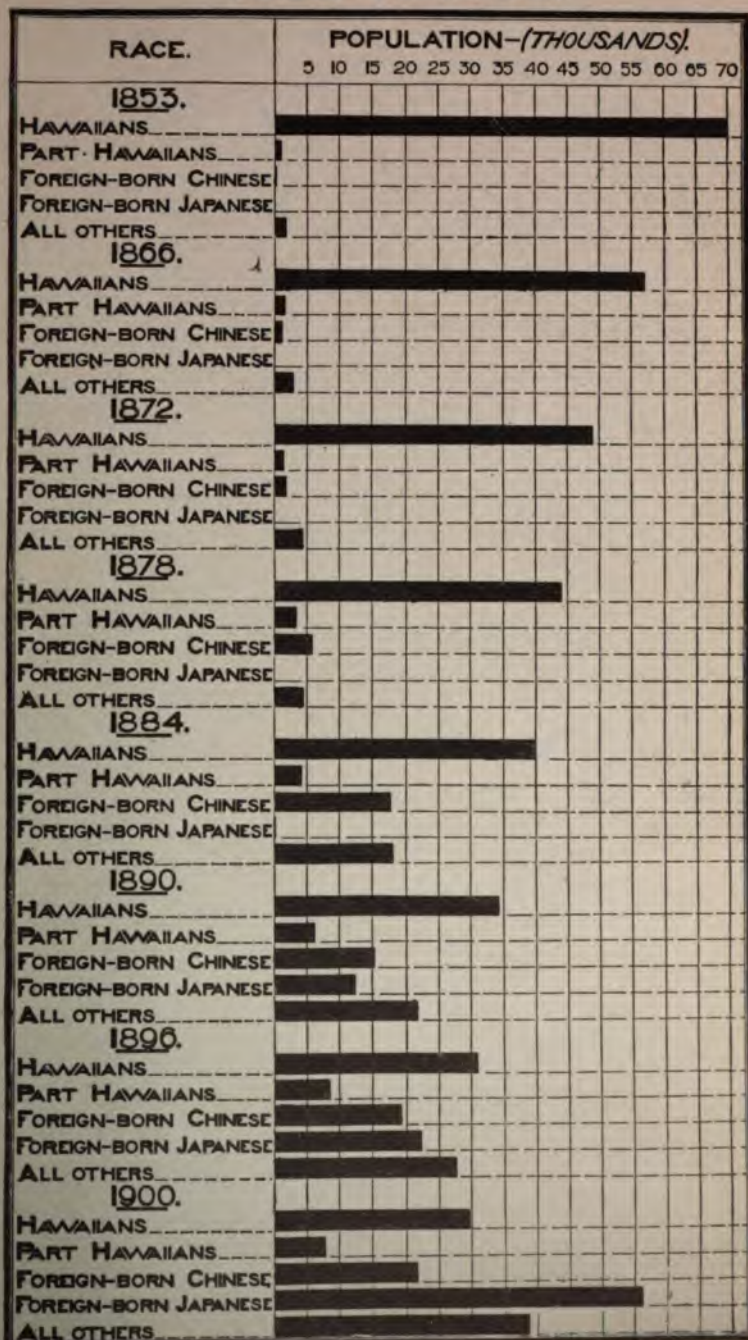
TABLE 7.—AVERAGE DAILY WAGES OF VARIOUS CLASSES OF PLANTATION LABOR, 1890 TO 1902.

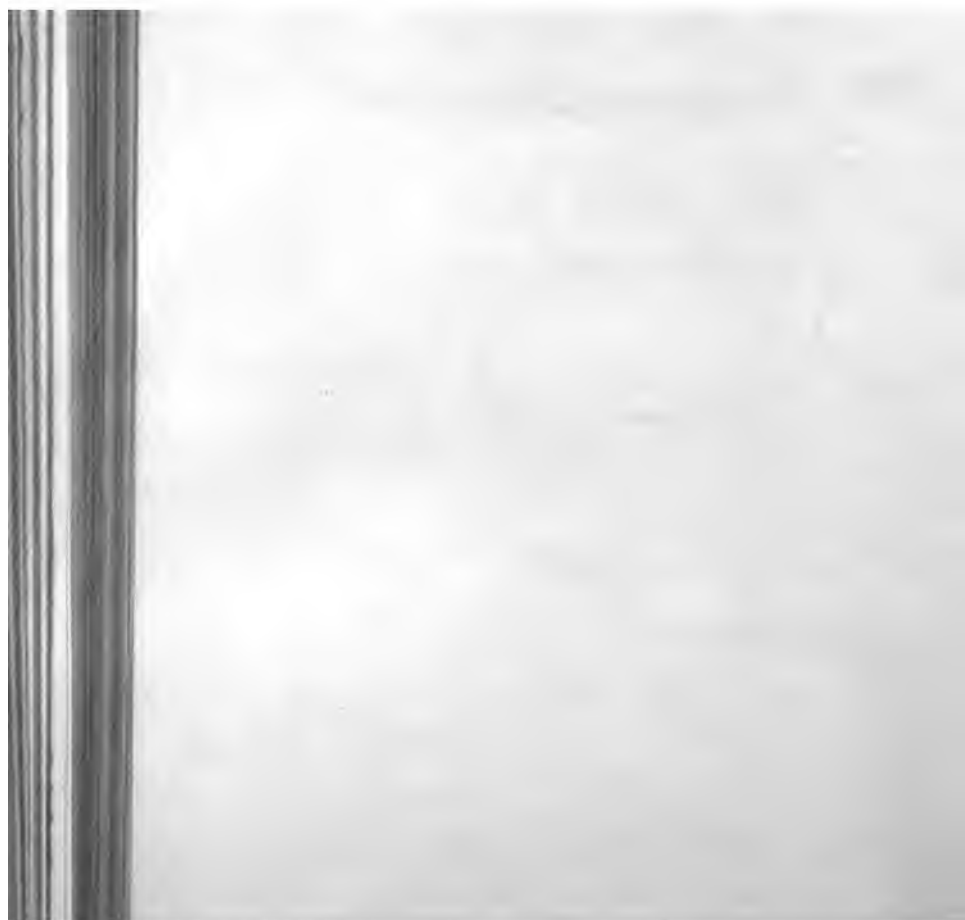
Occupation.	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902
Unskilled (male)....	\$0.65	\$0.64	\$0.60	\$0.56	\$0.55	\$0.53	\$0.53	\$0.52	\$0.52	\$0.56	\$0.64	\$0.76	\$0.71
Unskilled (female)....	.39	.40	.39	.38	.38	.37	.35	.32	.32	.37	.39	.44	.45
Mechanics.....	3.04	3.57	3.21	2.93	3.16	3.90	3.28	3.29	3.24	3.07	3.74	3.69	3.80

TABLE 8.—PERSONS EMPLOYED IN SKILLED OCCUPATIONS ON SUGAR PLANTATIONS, BY CLASSIFIED DAILY WAGES AND RACE, 1902.

Race.	Number earning daily wages—		
	Less than \$1.00.	\$1.00 or under \$1.50.	\$1.50 or over.
Hawaiians and Part-Hawaiians.....	29	111	141
Chinese.....	48	56	37
Japanese.....	440	611	130
Portuguese.....	46	185	255
Caucasians.....	7	38	644
All others.....	15	15	7
Total.....	585	1,016	1,214

POPULATION BY RACE, 1853 to 1900.





The two following charts show respectively the per cent of total persons engaged in gainful occupations of each race in 1900 and the per cent of total persons engaged in gainful occupations in each general occupation group in 1900:

CHART 259.

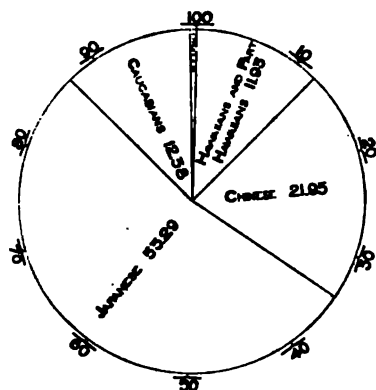


CHART 260.

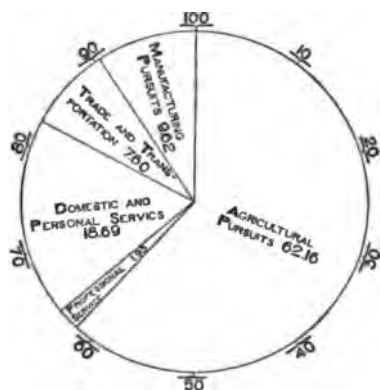


TABLE 4.—PERSONS ENGAGED IN MECHANICAL OCCUPATIONS, BY RACE, 1890, 1896, AND 1900.

Race.	1890.		1896.		1900.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Hawaiians.....	902	33.5	761	32.2	995	24.1
Chinese.....	564	21.0	220	9.3	629	15.0
Japanese.....	42	1.6	261	11.0	997	24.2
Caucasians.....	1,182	43.9	1,123	47.5	1,512	36.7
Total.....	2,690	100.0	2,365	100.0	4,124	100.0

TABLE 5.—PERSONS ENGAGED IN CERTAIN MECHANICAL OCCUPATIONS, BY RACE, 1900.

Occupation.	Hawaiians and Part-Hawaiians.	Chinese.	Japanese.	Caucasians.	All others.	Total.
Blacksmiths.....	88	23	103	181	4	399
Carpenters and joiners.....	433	334	649	537	2	1,955
Iron and steel workers.....	102	1	4	58	7	172
Machinists.....	21	3	21	116	.....	161
Masons (brick and stone).....	20	1	46	162	1	230
Painters, glaziers, and varnishers.....	172	75	55	97	3	402
Plumbers, gas and steam fitters.....	13	.....	1	62	.....	76
Printers and pressmen.....	67	3	14	54	1	139
Tinners and tinware makers.....	5	45	11	20	.....	81

TABLE 6.—PERSONS EMPLOYED ON SUGAR PLANTATIONS, BY RACE, 1892 TO 1902.

Race.	1892.	1894.	1895.	1896.	1897.	1898.	1899.	1901.	1902.
Hawaiians.....	1,717	1,903	1,584	1,615	1,497	1,482	1,326	1,470	1,493
Chinese.....	2,617	2,786	3,847	6,289	8,114	7,200	5,979	4,976	^a 4,326
Japanese.....	13,019	13,884	11,584	12,893	12,068	16,786	25,644	27,537	^b 30,640
Portuguese.....	2,526	2,177	2,499	2,268	2,218	2,064	2,153	2,417	2,669
Caucasians.....	516	563	473	600	675	979	806	991	1,032
All others.....	141	181	133	115	81	68	79	2,196	2,082
Total.....	20,536	21,294	20,120	23,780	24,653	28,579	35,987	39,587	42,242

^a Including a few Japanese not separately reported.^b Not including a few Japanese not separately reported, and included in Chinese.^c This is not the correct total of the items; the figures given, however, are as shown in the Hawaiian Annual.

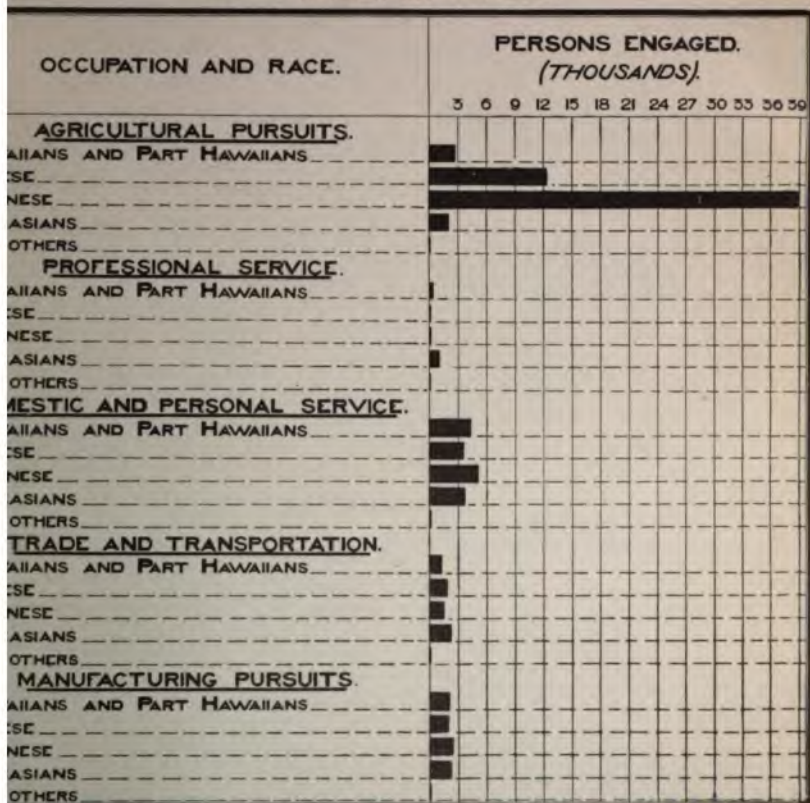
TABLE 7.—AVERAGE DAILY WAGES OF VARIOUS CLASSES OF PLANTATION LABOR, 1890 TO 1902.

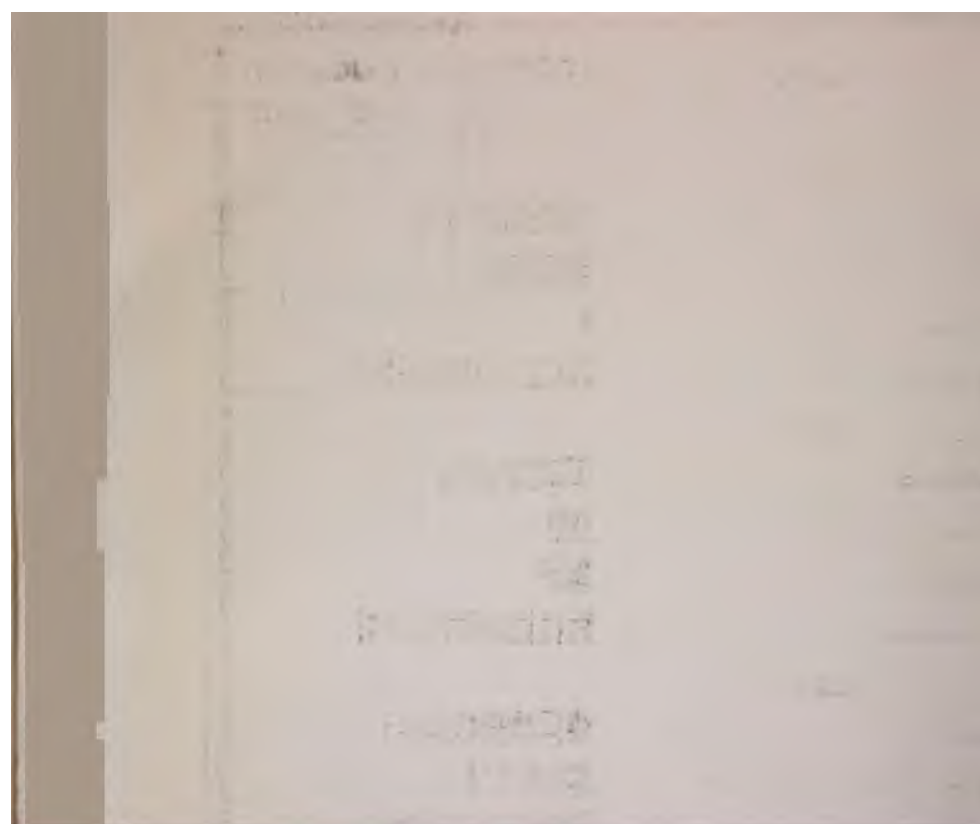
Occupation.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
Unskilled (male)...	\$0.65	\$0.64	\$0.60	\$0.56	\$0.55	\$0.53	\$0.53	\$0.52	\$0.52	\$0.58	\$0.64	\$0.76	\$0.71
Unskilled (female)...	.39	.40	.39	.38	.38	.37	.35	.32	.32	.37	.39	.44	.45
Mechanics.....	3.04	3.57	3.21	2.93	3.16	3.90	3.28	3.29	3.24	3.07	3.74	3.69	3.80

TABLE 8.—PERSONS EMPLOYED IN SKILLED OCCUPATIONS ON SUGAR PLANTATIONS, BY CLASSIFIED DAILY WAGES AND RACE, 1902.

Race.	Number earning daily wages—		
	Less than \$1.00.	\$1.00 or under \$1.50.	\$1.50 or over.
Hawaiians and Part-Hawaiians.....	29	111	141
Chinese.....	48	56	37
Japanese.....	440	611	130
Portuguese.....	46	185	255
Caucasians.....	7	38	644
All others.....	15	15	7
Total.....	585	1,016	1,214

PERSONS ENGAGED IN GAINFUL OCCUPATIONS BY RACE, IN 1900.





PERSONS ENGAGED IN MECHANICAL OCCUPATIONS BY RACE, 1890, 1896, AND 1900.

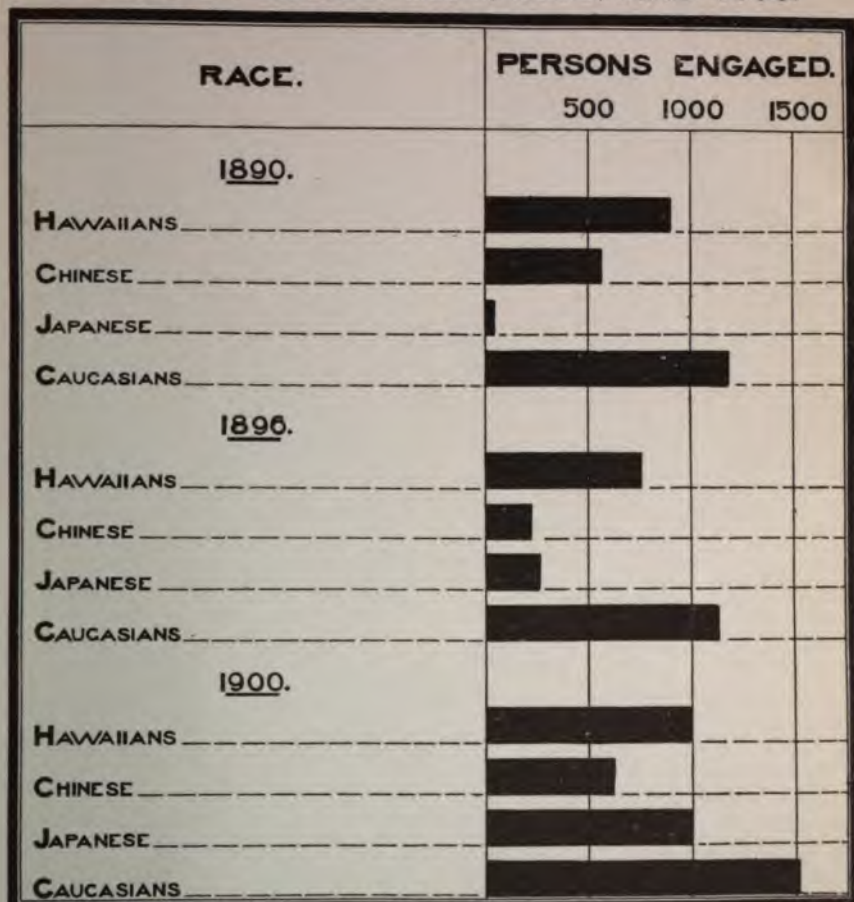
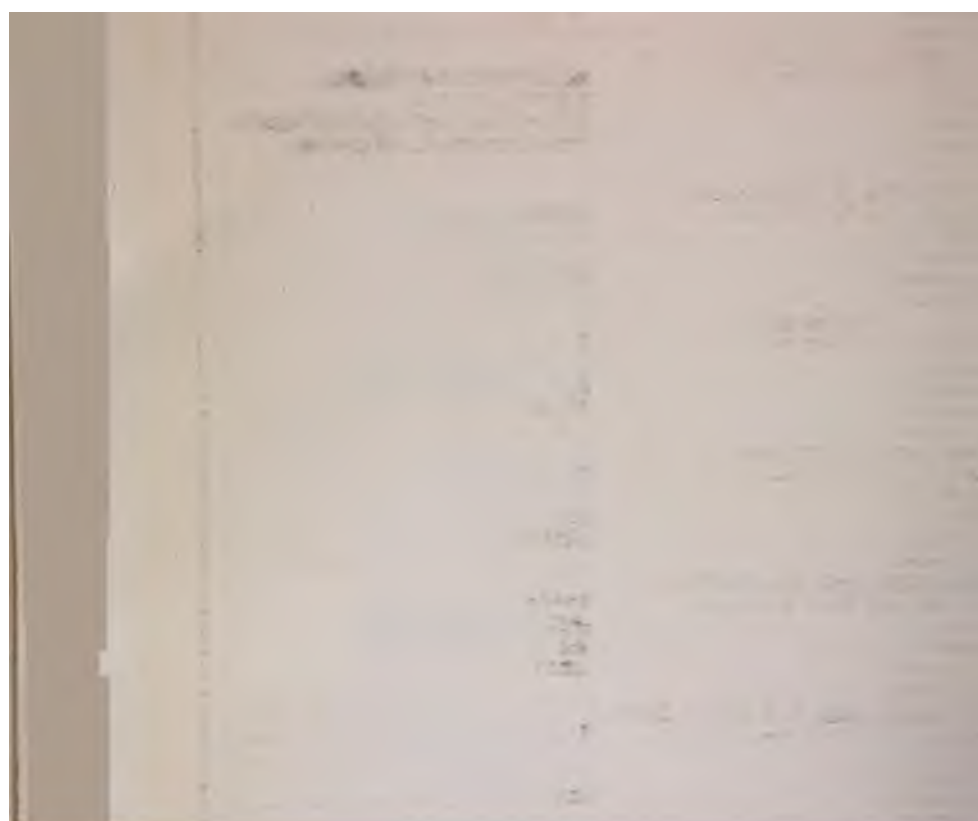
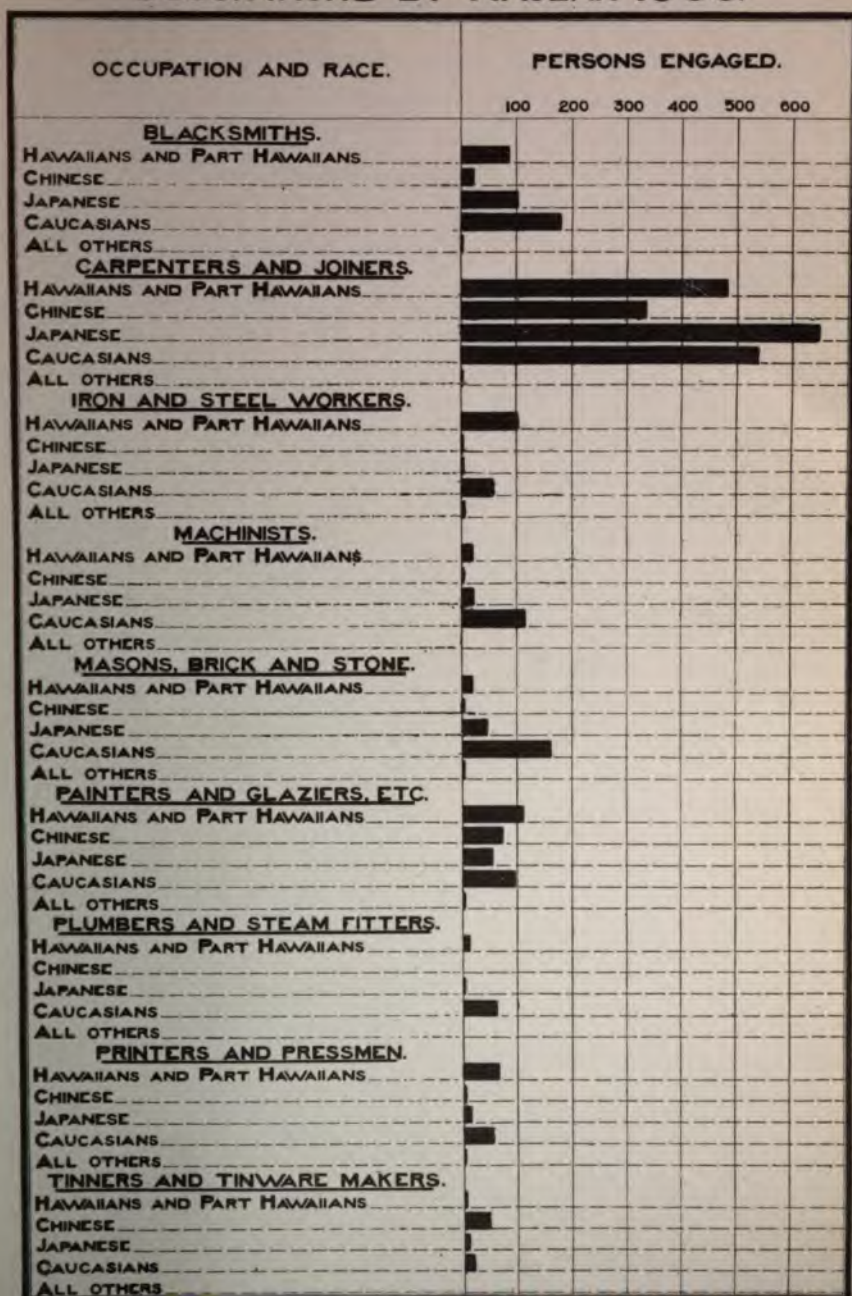
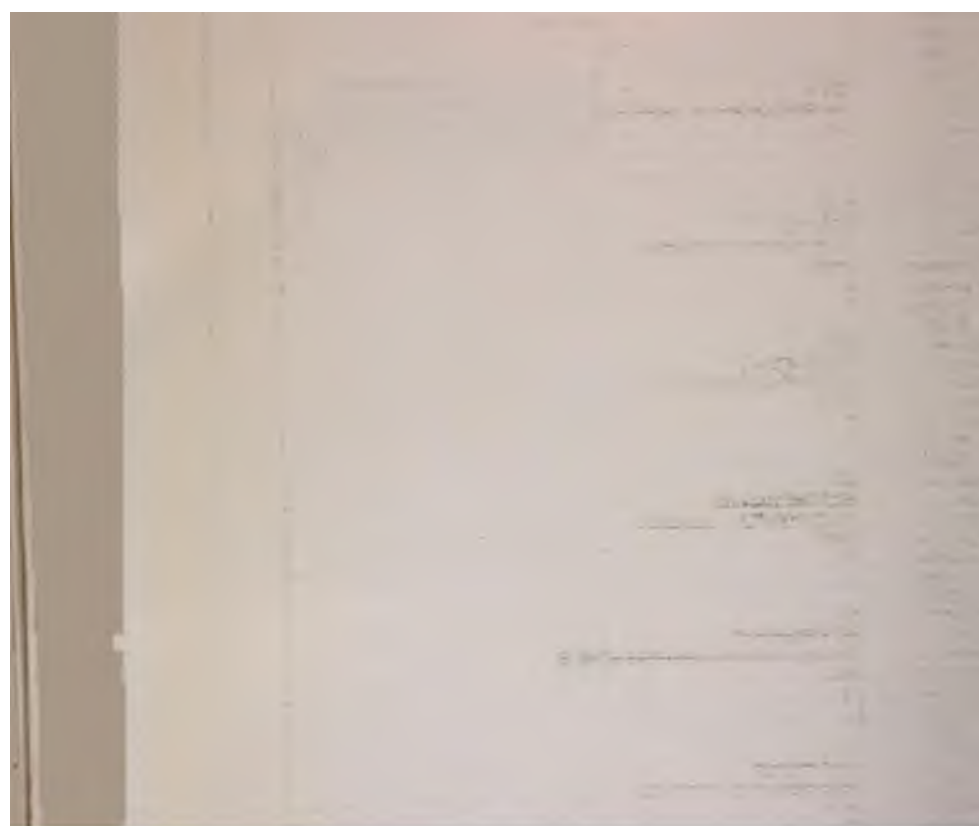


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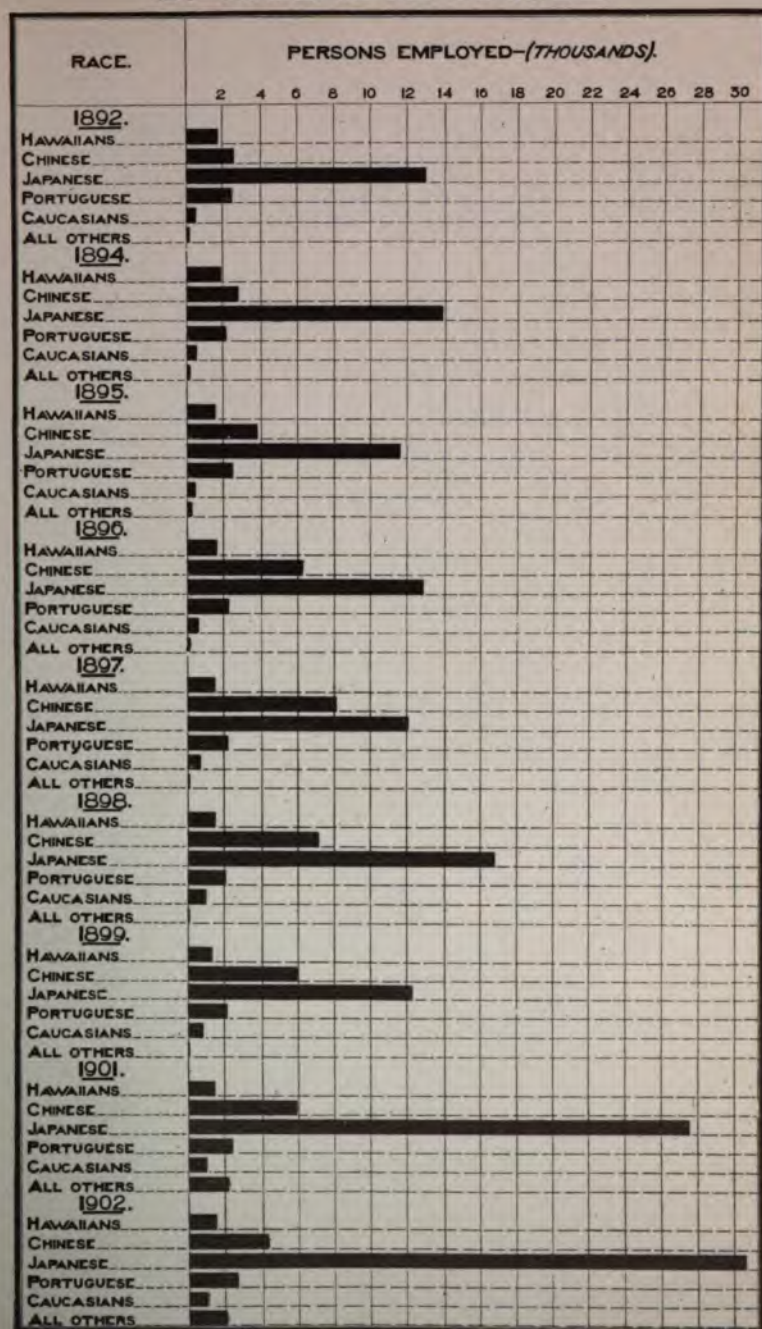


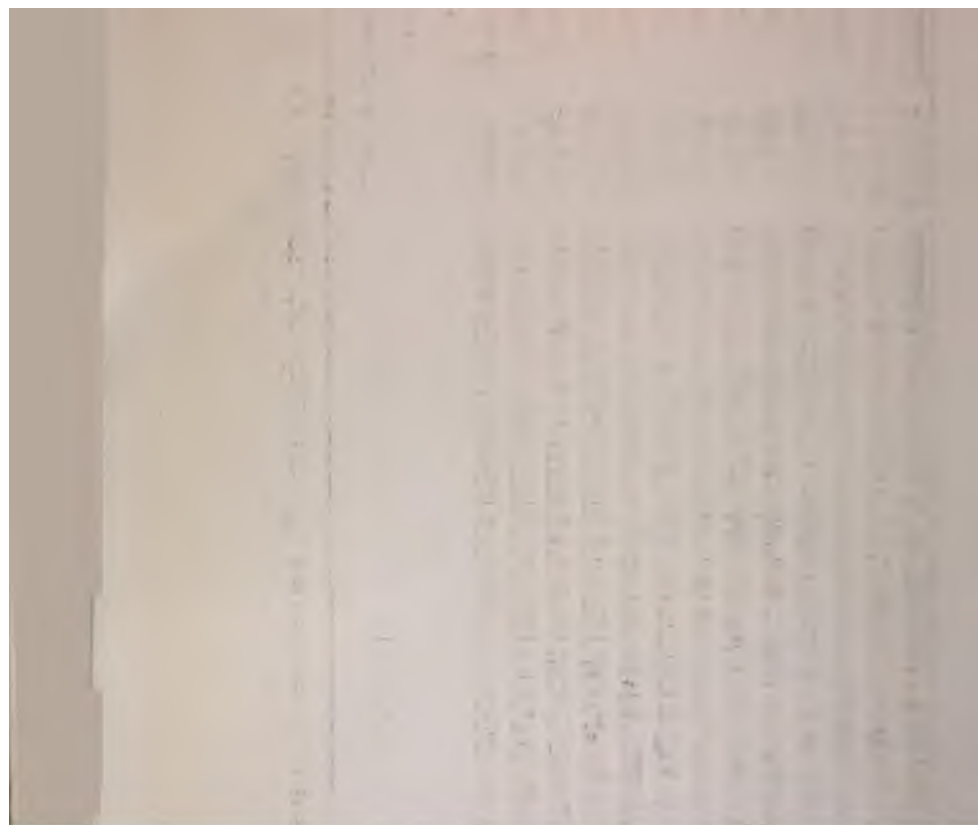
PERSONS ENGAGED IN CERTAIN MECHANICAL OCCUPATIONS BY RACE. IN 1900.

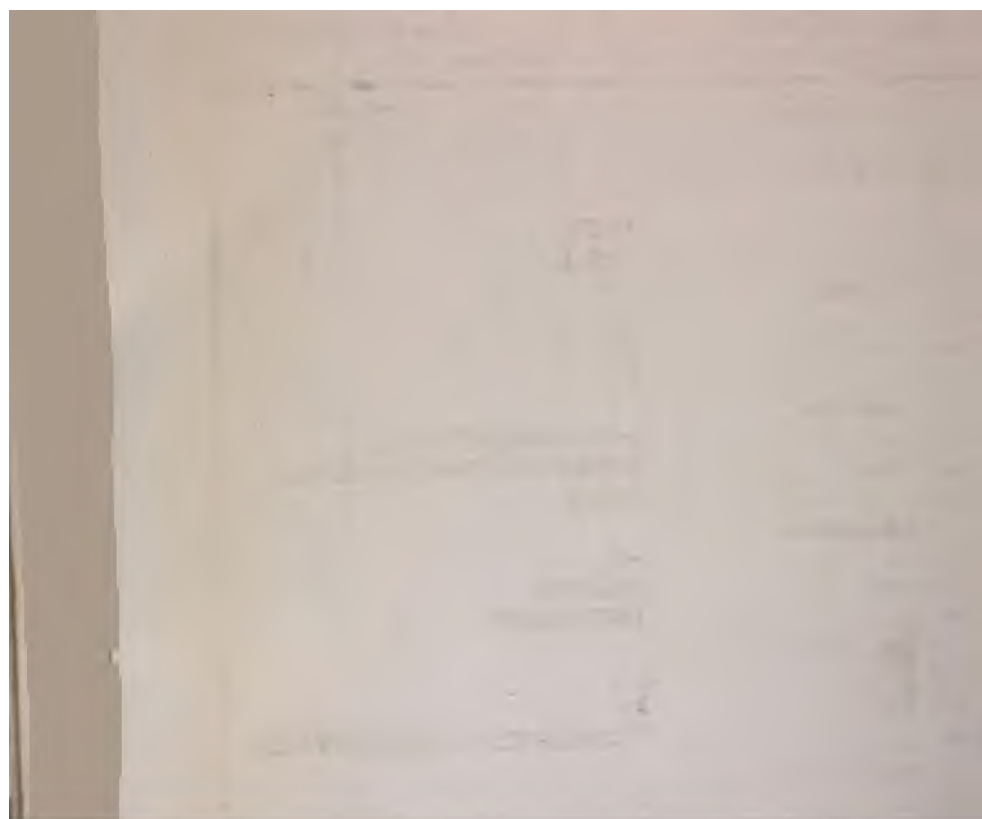




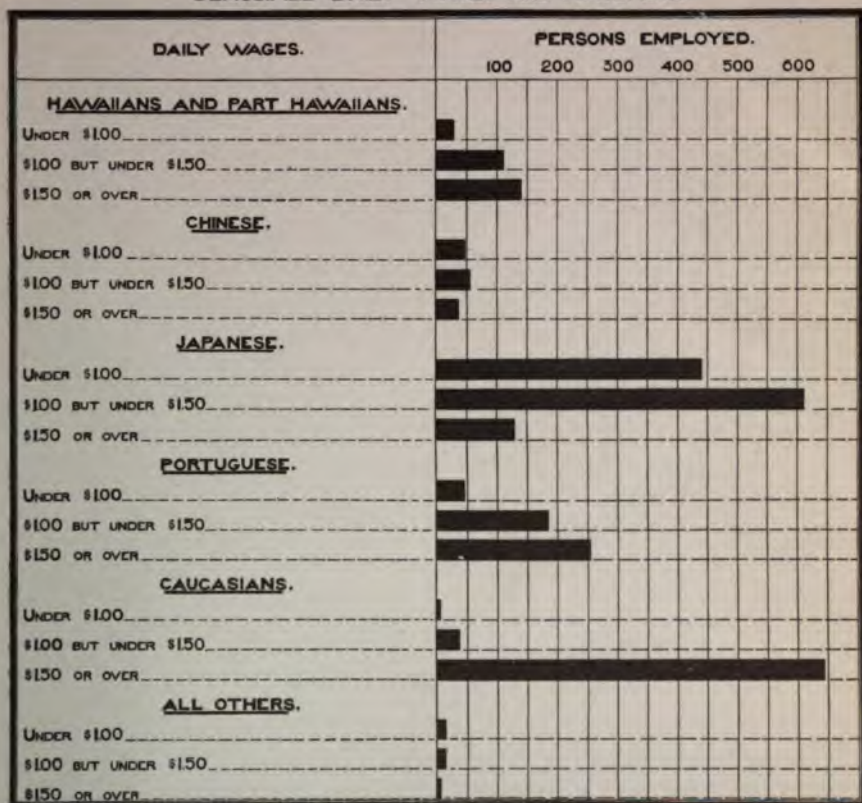
PERSONS EMPLOYED ON SUGAR PLANTATIONS. BY RACE. 1892 TO 1902.







**PERSONS EMPLOYED IN SKILLED OCCUPATIONS ON SUGAR PLANTATIONS, BY
CLASSIFIED DAILY WAGES AND RACE, 1902.**



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DEPARTMENT OF COMMERCE AND LABOR.

BULLETIN

OF THE

BUREAU OF LABOR.

No. 55—NOVEMBER, 1904.

ISSUED EVERY OTHER MONTH.



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1904.**

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ASSOCIATE EDITORS,
G. W. W. HANGER,
CHAS. H. VERRILL, G. A. WEBER.

CONTENTS.

	Page.
Child labor—editorial note.....	1491
Building and loan associations in the United States, by G. W.W. Hanger.	1491-1572
The revival of handicrafts in America, by Max West, Ph. D.....	1573-1622
Agreements between employers and employees.....	1623-1635
Digest of recent reports of State bureaus of labor statistics:	
Illinois	1636-1638
Indiana	1638-1640
Iowa	1640-1642
Kansas	1643-1645
Missouri	1645, 1646
New Jersey	1646-1650
Pennsylvania	1650-1652
Digest of recent foreign statistical publications.....	1653-1670
Decisions of courts affecting labor.....	1671-1677
Laws of various States relating to labor enacted since January 1, 1896....	1678-1686

11
12

BULLETIN

OF THE

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No. 55.

WASHINGTON.

NOVEMBER, 1904.

CHILD LABOR—EDITORIAL NOTE.

In the article on Child Labor in the United States, in Bulletin No. 52, May, 1904, page 489, the statement was made that "In New York 14 years is the age under which children can not legally be employed in manufacturing and mercantile establishments during the sessions of the public schools, but children between 12 and 14 years of age can be employed in mercantile establishments during vacations." To this should have been added the further statement that such employment is permitted only in villages and cities of the third class (less than 50,000 population) and only to such children as have obtained employment certificates. The law appears in full on pages 608 to 613 of the above Bulletin.

C. D. W.

BUILDING AND LOAN ASSOCIATIONS IN THE UNITED STATES.

BY G. W. W. HANGER.

ORIGIN AND GROWTH.

No one class of provident institutions in this country, perhaps, has contributed more largely than have building and loan associations to the material welfare of that portion of our citizens dependent on a daily wage for support.

Including under this general title all those institutions having for their principal objects the encouragement of the systematic saving of small sums and the loaning of money to their members for the purpose of building homes, we have the most important and successful example of cooperation in the United States. This movement, destined to attain such enormous proportions and exert such a marked influence upon the economic and social conditions of the workingman, was begun as early as 1831, the first association in the United States having been organized at Frankford, Pa. (now a part of Philadelphia), on January 3, 1831, under the name of the Oxford Provident Building Association. This association was of the simplest form and its organization was doubtless due to the efforts of English workmen in the

factories and mills located at Frankford, who had brought with them a knowledge of the building societies of the mother country, in which similar associations had been in operation since 1789. The second association was organized in Brooklyn in 1836, and while the movement gradually grew in strength its present proportions were not approximated until many years later. The first authentic information published relative to the number and importance of these institutions was the result of a careful canvass of the country by the United States Department of Labor^a in 1893. Previous to this time no great body of facts was obtainable, although State leagues had been organized in Arkansas, California, Illinois, Indiana, Iowa, Louisiana, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Jersey, New York, Ohio, and Pennsylvania. For the purpose of bringing these associations into closer relations and to afford opportunity for the discussion of matters of mutual interest, the United States League of Local Building and Loan Associations was formed on April 14, 1892, since which date annual meetings have been held in various parts of the country. The objects of this national league were to promote the enactment of such laws as would secure the just and safe management of these associations; to devise and promote the adoption of systematic, equitable, and safe methods of conducting their business; to encourage and stimulate the building and owning of homes, and in a general way to promote the interests of mutual or cooperative building and loan associations in the United States. It should be said in this connection that the national league, under the control and guidance of able and enthusiastic officers, has most fully justified its existence.

Originating in a small way as a purely local cooperative movement for fostering self-help among the wage-earning classes, almost half a century elapsed before the possibilities and uniform success of these associations were fully demonstrated and they began that almost marvelous growth, the extent of which is shown by the report of the Department of Labor made in 1893, at what may safely be termed the end of the period of their most rapid numerical development. At the time of that report there were 5,598 local and 240 national associations in existence. Of the 5,579 local associations in existence in 1893 concerning which data could be secured, but 433 were organized prior to 1878 and were in existence in that year. During the next five years 589 of these associations were organized, making 1,022 in existence in 1883, or more than double the number in 1878. During the next five years 2,163 were organized, making 3,185 in existence in 1888, or more than three times the number in 1883. Two thousand three hundred and ninety-four were organized during the next five years, making the number in 1893, including the 19 associations which did not report as to date of organization, 5,598.

^a Now Bureau of Labor, Department of Commerce and Labor.

While these numbers do not include a comparatively small proportion of associations of which there is no available record, whose existence was terminated during the period from 1878 to 1893, they are indicative of the growth of this movement which was most rapid during the decade from 1880 to 1890. This conclusion is justified by the result of a careful examination of the figures available as to the number of associations in existence each year since 1893. These have been compiled from the reports of the various States which have established supervision over these associations, and have been estimated for the remainder of the country. They include not only the local associations, which constitute the great bulk of building and loan associations, but also the small proportion of these organizations which were national in character. The inclusion of the latter has been rendered necessary because of the impossibility of making a separate statement from the figures available. The table containing the result of this compilation shows the number of associations in each of the 19 States for which records were available for each year from 1893 to 1903. The estimated number of associations in the remaining States of the Union are shown in the same manner immediately following.

NUMBER OF BUILDING AND LOAN ASSOCIATIONS IN THE UNITED STATES, 1893 TO 1903.

State.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
California	133	137	144	147	151	148	151	148	138	138	133
Connecticut	15	16	13	16	15	15	15	16	16	16	16
Illinois	669	698	726	718	682	637	599	572	546	514	500
Indiana	445	496	501	504	488	446	421	408	403	392	379
Iowa	89	100	110	115	108	106	100	85	82	72	" 72
Maine	29	30	33	33	33	32	32	33	34	34	35
Massachusetts	115	117	119	122	123	121	125	126	128	130	130
Michigan	75	74	74	73	74	73	70	66	63	60	58
Minnesota	97	92	89	84	80	53	52	40	21	21	18
Missouri	366	314	310	288	255	222	191	174	118	138	134
Nebraska	70	82	78	67	64	56	60	57	56	55	55
New Hampshire	17	18	18	18	18	17	18	17	17	16	17
New Jersey	288	306	301	316	316	321	335	342	341	351	361
New York	418	368	361	349	361	358	346	337	321	305	300
North Dakota	6	4	7	8	8	7	6	6	6	5	5
Ohio	721	747	745	766	761	768	773	763	757	737	731
Pennsylvania	1,079	1,105	1,131	1,173	1,197	1,182	1,174	1,155	1,168	1,178	1,196
Tennessee	78	74	70	58	45	40	34	28	25	22	21
Wisconsin	42	46	49	51	53	52	48	48	50	55	53
Other States	1,086	1,098	1,094	1,079	1,076	979	1,028	1,069	1,083	1,159	1,136
Total	5,838	5,922	5,973	5,975	5,908	5,639	5,581	5,490	5,463	5,378	5,350

* Figures for 1903 not being available, those for 1902 are used as being approximately correct.

The total, as given in the above table, shows that the number of associations increased by 84 in 1894 and by 51 in 1895, while it remained practically stationary in 1896. Since 1896 the number has steadily decreased each year from 5,975 in 1896 to 5,350 in 1903, a difference of 625, or 10.5 per cent. This decrease was distributed over the years since 1896 as follows: In 1897, 67; in 1898, 269; in 1899, 58; in 1900, 91; in 1901, 87; in 1902, 25, and in 1903, 28.

It has been quite generally supposed that a great decline in the number and importance of these associations had occurred during the

last decade. It is seen, however, that this is not the case. While the rapid increase in numbers which marked the decade previous to 1893 has not continued, the building association has almost held its own during the years of financial depression, and there is every reason to predict a steady, if slow, growth in future years.

Some estimate of the great financial importance of these institutions may be gained by an inspection of the following table, which shows the assets of building and loan associations for each year from 1893 to 1903, inclusive. The figures in this table have been compiled from the reports of the various States exercising supervision over these associations and have been estimated for the remainder of the country. These assets consist chiefly of loans secured by real estate owned by members of the associations, although a certain proportion consists of loans on other collateral, cash on hand, real estate, and property owned by the associations, etc.

ASSETS OF BUILDING AND LOAN ASSOCIATIONS, 1893 TO 1903.

State.	1893.	1894.	1895.	1896.	1897.
California	\$18,093,591	\$20,820,082	\$21,500,520	\$21,470,310	\$21,791,929
Connecticut	477,345	790,605	1,931,663	2,707,926	3,243,935
Illinois	75,771,559	81,796,350	82,639,258	80,105,574	73,399,193
Indiana	26,623,795	30,090,926	34,347,023	38,095,148	37,624,413
Iowa	7,365,002	9,500,000	11,000,000	11,877,312	11,506,982
Maine	1,375,227	2,193,956	2,469,884	2,691,446	2,912,964
Massachusetts	13,653,330	18,581,671	20,552,667	22,906,692	24,597,843
Michigan	7,399,865	9,500,000	10,000,000	11,581,316	11,192,783
Minnesota	15,739,640	15,837,910	14,891,796	11,747,055	10,363,952
Missouri	35,841,560	35,404,546	28,000,000	26,352,955	22,497,709
Nebraska	3,073,563	3,898,001	3,924,778	3,771,834	3,554,788
New Hampshire	1,447,490	1,445,411	1,666,921	1,853,070	1,963,058
New Jersey	31,714,681	39,341,081	38,882,110	43,379,195	46,614,092
New York	33,008,552	45,023,735	50,168,683	54,490,218	61,584,719
North Dakota	257,833	218,396	297,379	313,150	379,320
Ohio	67,626,374	86,017,104	92,121,651	96,906,524	99,770,161
Pennsylvania	81,870,964	90,700,000	99,519,918	107,008,101	111,714,871
Tennessee	12,897,365	13,150,000	13,425,765	14,880,752	7,464,891
Wisconsin	3,197,142	3,350,000	3,495,676	3,500,000	3,568,440
Other States	91,417,968	96,471,020	93,864,626	95,903,063	109,247,483
Total	528,852,885	602,553,834	624,700,318	651,544,641	664,993,531

State.	1898.	1899.	1900.	1901.	1902.	1903.
California	\$20,771,227	\$20,285,454	\$18,935,684	\$17,881,576	\$18,199,867	\$19,863,832
Connecticut	3,627,828	3,774,526	4,157,804	4,245,048	4,145,197	3,851,539
Illinois	63,451,758	54,104,602	47,896,148	43,684,290	40,363,852	39,432,282
Indiana	31,808,815	31,435,588	29,637,826	29,292,668	30,018,407	30,035,088
Iowa	11,529,393	10,189,634	8,208,805	6,910,866	5,656,469	5,656,469
Maine	3,009,999	2,974,716	2,862,179	2,865,381	2,854,622	2,832,206
Massachusetts	25,733,351	26,744,647	27,721,748	28,674,208	30,391,666	32,919,739
Michigan	10,840,610	10,148,471	10,118,876	9,896,764	9,906,074	10,746,299
Minnesota	6,300,532	5,616,152	4,409,001	2,863,839	2,409,271	1,648,983
Missouri	18,255,186	13,835,817	11,448,393	9,391,373	8,228,266	7,771,791
Nebraska	3,428,728	3,352,782	3,697,506	4,314,745	4,758,291	5,343,429
New Hampshire	1,939,798	1,955,567	1,657,506	1,874,219	1,803,117	1,753,560
New Jersey	48,789,328	46,100,000	51,125,050	52,891,594	52,870,672	51,767,687
New York	61,746,630	66,034,789	59,633,737	56,726,941	53,952,897	43,699,606
North Dakota	392,902	364,130	393,684	438,684	463,544	570,941
Ohio	101,089,277	102,408,700	105,502,112	105,874,307	110,951,257	101,221,442
Pennsylvania	112,695,767	112,130,437	110,819,510	110,817,281	113,886,020	117,861,779
Tennessee	6,406,925	5,241,651	3,778,571	3,419,319	3,186,577	3,066,096
Wisconsin	3,582,923	3,490,470	3,590,125	3,462,630	3,593,934	3,819,769
Other States	107,912,314	108,119,304	108,581,676	111,847,509	112,016,594	112,687,688
Total	649,423,380	628,239,337	614,119,175	605,906,842	609,599,096	599,550,856

* Figures for 1903 not being available, those for 1902 are used as being approximately correct.

Reference to the total of this table shows that in the year 1893 the assets of these institutions had reached the enormous figure of \$528,852,885. As was observed in the report which has been referred to and which covered the year 1893—

A business represented by this great sum, conducted quietly, with little or no advertising, and without the experienced banker in charge, shows that the common people, in their own ways, are quite competent to take care of their savings, especially when it is known that but 35 of the associations now in existence (1893) showed a net loss at the end of their last fiscal year and that this loss amounted to only \$23,332.20.

In 1894 the assets had increased by 74 millions of dollars to a total of nearly 603 millions; in 1895 they had increased by 22 millions to nearly 625 millions; in 1896 an increase of 27 millions brought the total up to nearly 652 millions; while in 1897, the year in which the greatest assets are shown, an increase of 13 millions of dollars brought the total up to nearly 665 millions. During the following four years, 1898 to 1901, the assets of these institutions had decreased by 59 millions of dollars, a relatively small amount, bringing the total down to approximately 606 millions, but in 1902 an increase of nearly 4 millions is shown—the assets for this year being \$609,599,096, or over 80 millions more than the assets shown for 1893, the first year of the decade, by the report of the Department of Labor. In 1903 there was a considerable decrease in the total assets, due to the failure of a large company in New York and to the fact that several large building and loan associations in Ohio were organized into trust companies.

Considering the figures shown for 1903 for the various States, it is seen that Pennsylvania ranks first with 1,196 associations, having assets of nearly 118 millions of dollars; Ohio follows closely with 731 associations, having assets of over 101 millions; New Jersey comes next in point of assets with 361 associations, having assets of nearly 55 millions, and is followed by New York with 300 associations, having nearly 44 millions; Illinois with 500 associations, having over 39 millions; Massachusetts with 130 associations, having nearly 33 millions; Indiana with 379 associations, having over 30 millions; California with 133 associations, having assets of nearly 20 millions, etc.

A further impression of the importance of these institutions may be gained by making a comparison of their assets with the population of the various States for which authentic data are obtainable. Taking the assets for the census year 1900, and the population as shown by the United States census, the table following is presented, showing for each of 19 States the per capita investment in these associations.

ASSETS PER CAPITA OF BUILDING AND LOAN ASSOCIATIONS IN NINETEEN STATES
IN 1900.

State.	Population.	Assets of associations.	Per capita assets.
California	1,485,053	\$18,935,884	\$12.75
Connecticut	908,420	4,157,804	4.58
Illinois	4,821,550	17,896,148	9.93
Indiana	2,516,462	29,637,826	11.78
Iowa	2,231,853	8,208,405	3.68
Maine	694,466	2,862,179	4.12
Massachusetts	2,805,346	27,721,748	9.88
Michigan	2,420,982	10,118,876	4.18
Minnesota	1,751,394	4,469,004	2.55
Missouri	8,106,665	11,448,395	8.69
Nebraska	1,066,300	3,697,356	3.47
New Hampshire	411,588	1,857,606	4.51
New Jersey	1,883,669	57,125,050	27.14
New York	7,268,894	59,653,737	8.21
North Dakota	319,146	393,263	1.23
Ohio	4,157,545	105,502,112	25.38
Pennsylvania	6,302,115	110,493,510	17.53
Tennessee	2,020,616	3,778,571	1.87
Wisconsin	2,069,042	3,580,125	1.73
Total	48,241,106	505,537,499	10.48

From the above table, which has been constructed from a suggestion of the secretary of the League of Local Building and Loan Associations in his report at the ninth convention of that body, it is seen that if the assets of building and loan associations were distributed in each State among its inhabitants the per capita amount in New Jersey would be \$27.14; that in Ohio, \$25.38; that in Pennsylvania, \$17.53; that in California, \$12.75; that in Indiana, \$11.78, etc. The 19 States for which data are given include a population of nearly 50 millions, while the investments in building and loan associations amount to over 500 millions of dollars, an average of over \$10 for each individual comprising their population. In the report alluded to above it is stated that in Ohio 1 in every 14 of its population is a shareholder of a local building and loan association, while in New Jersey the ratio is 1 in every 18; in Pennsylvania, 1 in every 22; in Indiana, 1 in every 23, etc. Considering the 19 States as a whole, 1 in every 40 of the population was a shareholder in a building and loan association in the census year.

As regards the membership of building and loan associations it is not possible to secure even approximate figures for the period. According to the report of the Department of Labor the membership in 1893 was 1,745,725, and it is probable that the membership closely followed the course of numbers and assets of associations as shown in the preceding tables. The membership of local associations as estimated for 1895 and succeeding years by Mr. H. F. Cellarius, the Secretary of the United States League of Local Building and Loan Associations is as follows: In 1895, 1,545,129; in 1896, 1,610,300; in 1897, 1,642,179; in 1898, 1,617,837; in 1899, 1,512,685; in 1900, 1,495,136; in 1901, 1,539,593; in 1902, 1,530,707, and in 1903, 1,566,700. As indicated, these figures

relate solely to local associations and do not include a relatively small membership belonging to national associations.

The wonderful growth of these institutions during the decade from 1880 to 1890 has been shown and it is not difficult to discover some of the many causes of their great popularity and increase in numerical and financial importance. The feature of cooperation always appeals strongly to men of small means, enabling them when associated under intelligent management to accomplish results impossible to the individual. Building and loan associations were established as purely cooperative societies and the accumulations of their members, which individually would have remained idle and unproductive, were united and directed into productive channels resulting in large profits in which each member shared in proportion to his interest. To the possibility of securing large profits on small accumulations, coupled with the greatest measure of financial safety, is doubtless due much of the early popularity of these institutions. Many forms of cooperation have failed to accomplish hoped-for results, but these institutions have been uniformly successful from their inception. Democratic in their influences they promoted a strong fraternal feeling among their members, while the simplicity of their methods rendered their organization and operation easy and safe. Then, too, they appealed most strongly to the prevalent spirit of home building and home owning. These and many other causes led to the rapid organizing of these institutions throughout the country, and it is probable that by 1893 the field of operation had been quite fairly covered in many of the States. To this fact and the growing competition of savings banks and trust companies as well as to the changes in industrial conditions is due to some extent, at least, the cessation in their growth during the last decade. Then, too, the success which had attended their operations from the beginning finally resulted in the organization of associations under their name but lacking the essential feature of cooperation. The failure of a number of large institutions of this character and the consequent financial loss of their shareholders no doubt had a certain unfavorable influence which was not dissipated for some years, when the exposure of their methods and the gradual increase of State activity in the way of special legislation regulating the operations of associations and the provision for official supervision of their business and conduct, made impossible the organization and operation of such institutions on other than safe and equitable plans.

LOCAL AND NATIONAL ASSOCIATIONS.

The terms local and national have been used in connection with these associations. The figures last given relating to membership are for local associations only, while the preceding tables include associa-

tions both local and national. It becomes necessary, therefore, at this point to define clearly the meaning of the two terms as applied to building and loan associations. While the business of these two classes of associations is conducted in a general way under substantially the same methods, the local association confines its operations to a small territory, while the national operates without reference to the residence of its shareholders or the location of the property on which loans are to be made. The distinction is a very important one. The primitive association was purely local in character and embodied the true cooperative principle. Usually the members were personally known to each other, and met at regular intervals at some convenient place in the neighborhood to pay their dues, transact such other business as might be necessary, and discuss the affairs of their association. Each member had in this way a thorough understanding of the affairs and transactions of the association, and contributed his influence, knowledge, and experience to its success. Its officers were personally known to each member, its expenses were small, its loans were made to members only, and the value of the security offered was readily ascertainable.

National associations, on the other hand, occupy a broader field of operations. Under the plan usually adopted they are accustomed to go into distant counties or even States and establish branch associations, each having perhaps its own board of directors and officers who are authorized to sell stock, make loans, and transact a general building and loan business, under the approval of the central association. In exercising these powers they can not avail themselves of the active cooperation on the part of their members which is practiced by local associations. This, coupled with other causes, such as heavy expenses resulting from the necessity of maintaining branch offices and the employment of several sets of officers, high salaries, incompetent and perhaps interested appraisers of property upon which loans are sought, and in some cases dishonest administration have, in a number of instances, resulted in heavy losses to those who have invested in this class of associations. The ruinous experience met by these associations in their earlier days has resulted in a more careful, conservative, and economical management, and in many cases to some restriction as to the territory in which loans are made. Under proper laws regulating, controlling, and supervising these associations, as they are in force in many of the States, there is no doubt that they can render a valuable service and preserve to some extent the principles of cooperation which have rendered the economic service of their prototypes so beneficent. It is quite clear, however, that national associations are compelled from their very nature to operate under many disadvantages which are not encountered by locals. An English judge some

years ago said: "Nothing is more clear than that these societies were intended to be local; and with regard to the place of meeting, there is good reason why they should be locally confined. The general meetings should be held in the county where the members reside."

Judge Seymour Dexter, an ardent advocate of the local building and loan association, and an authority on all matters pertaining to these associations, in an address before the annual meeting of the United States League of Local Building and Loan Associations held at Cleveland in 1895, gave expression to the following views:

In my own thoughts and ideas, the building and loan association is a local institution, and the principles on which it is founded do not admit of unlimited extension. The unparalleled success of these associations in the past has been largely due to the fact that they were local and neighborhood institutions, and comparatively small in the aggregation of capital in each. The moment these associations become extended in the conduct of their business over large territory, that moment many of the elements of safety involved in the local association methods are necessarily eliminated, and dangerous ones substituted in their place. They are no longer genuine building and loan associations because no longer conducted on the methods on which these associations have won their success and grown into fame.

In an address before the American Economic Association Judge Dexter spoke concerning national associations as follows:

While these associations have assumed the name of the true building and loan association, they are no more entitled to use it as descriptive of their business than a western farm mortgage and trust company or an investment and loan company. The name assumed is a misnomer except the word "national." While they have assumed some of the methods of the true building and loan associations, as a whole their manner of doing business is entirely unlike them; they have, as a rule, eliminated from their scheme the modes and principles by which the success of the building and loan association has been secured.

The true building and loan association is a comparatively small affair; its operations are confined to the place where located, or the immediate vicinity; most of its officers serve without pay; each shareholder can know what the association is doing from month to month, and upon what securities his money is being invested. The shareholders can attend the annual meetings and vote in person for the officers of their choice. There are no official places with salaries of sufficient amount to entice the scheming and crafty, and no paid solicitors for business to mislead the ignorant and unwary.

These elements of safety are eliminated in the national; the motive for their organization is to furnish business and gain to those who organize and conduct them. No capital is required to be invested in the business. Their operations spread in time over many States; the shareholders can not know what the association is doing or how or where their money is being invested. They can not attend the annual meetings and vote in person for officers; they simply intrust their money to strangers to handle upon a promise that it will be returned at some time in the future with large interest.

Some of these associations will fall into the control of honest and capable men and be successful, but the greatest number will sooner or later come to failure and loss to the shareholders.

Whenever so fine a field of operations presents itself to the scheming and dishonest as the present system of the national building and loan association, we may rest assured that the scheming and dishonest will enter it and pluck their victims until restrained by proper legal restrictions.

Judge W. T. Dunmore, in an address at the first meeting of the United States League of Local Building and Loan Associations, expressed similar sentiments:

This system was intended as a means of enabling the wage-earner to become a home owner. It was not intended to be used as a system by which capitalists could deposit blocks of stock and thereby receive larger returns than could be received through the ordinary channels of investment. It was never intended to be perverted into land companies, which purchase real estate for the purpose of speculation. The building and loan association is a cooperative association, and from its very nature its membership should be confined to persons living in one neighborhood. The best results can not be attained unless a great part of the management is gratuitous. The main source of profit must be the receipts for the use of money loaned. The members should live so near that they can see upon what security their money is loaned. They should be personally acquainted with the officers and familiar with their business judgment. The investments should be made in the immediate neighborhood where the investors live.

THE LOCAL BUILDING AND LOAN ASSOCIATION AND ITS METHOD OF OPERATION.

The term building and loan association is the most common one applied to associations of this character, being used in a general sense to cover all institutions having similar purposes and methods, as mutual loan associations, savings fund and loan associations, cooperative savings and loan associations, cooperative banks, homestead aid associations, etc. While the term building and loan association is the most common one, the term mutual (or cooperative) savings and loan association more exactly states the purpose of these institutions. They do not engage, as a rule, in the work of building houses, but furnish their members a safe means for the gradual accumulation of savings, together with the opportunity of securing loans of money for the purpose of building homes. In his *Treatise on Building Associations*, Mr. Charles N. Thompson gives the following definition of these institutions:

The building association as now existing is a private corporation designed for the accumulation by the members of their money by periodical payments into its treasury, to be invested from time to time in loans to the members upon real estate for home purposes, the borrowing members paying interest and a premium as a preference in

securing loans over other members, and continuing their fixed periodical installments in addition, all of which payments, together with the nonborrower's payments, including fines for failure to pay such fixed installments, forfeitures for such continued failure of such payments, fees for transferring stock, membership fees required upon the entrance of the member into the society, and such other revenues, go into the common fund until such time as that the installment payments and profits aggregate the face value of all the shares in the association, when the assets, after payment of expenses and losses are prorated among all members, which, in legal effect, cancels the borrower's debt and gives the nonborrower the amount of his stock.

The methods of forming and operating these institutions in their simplest form may perhaps be made clearer and better understood by means of a concrete example, as follows:

One hundred men living in the same town or neighborhood agree to cooperate for the purpose of accumulating their savings and of building homes. Each of these is able to save one dollar or more each month, but none has sufficient money to purchase or build a home. In order to carry out their purpose a corporation is formed in which every member must be a stockholder to the extent of one or more shares. On each of these shares the sum of \$1 must be paid every month as dues until these payments together with the accumulated profits shall amount to \$200. If each member subscribes for one share it is seen that on monthly payments of \$1 per share, \$100 will be paid into the treasury of the association each month. If the operations of the association were confined purely to saving, two hundred months must elapse before each share will have reached its maturity value of \$200. As soon, however, as these compulsory payments, made at stated periods, amount to a sufficient sum, instead of allowing it to lie idle the association offers it as a loan on approved security. Such loans are usually confined to the members of the association. Among the hundred members there are several who desire to borrow for the purpose of purchasing or building homes, etc., and in order to determine to which one the loan shall be made the plan is adopted of allowing those interested to bid for the amount, the loan being made to the one who bids the highest premium in addition to the legal rate of interest. The money thus loaned must be used for the purpose above stated, the borrower securing the association against loss by a mortgage on the property purchased and on other real estate sufficient in value to insure the association against possible loss. At the same time the borrower must subscribe for or secure in some other manner a sufficient number of additional shares to make the maturing value of his holdings equal the amount of the loan, premiums, and interest.

The association thus secures two sources of profit on its accumulations—premiums on loans made and interest on the same. To the extent of this profit it is enabled to shorten the time that would

naturally elapse before the shares reach a maturity value of \$200. Nor are premiums and interest on loans the only sources of profit. Failure to pay his installment dues at the proper time results in the fining of the delinquent member. This fine operates both as a penalty on the member for delinquency and as a reimbursement to the association for any loss or inconvenience occasioned by such delinquency. Withdrawals are another source of profit to the association. Some members may find it impossible or undesirable to keep up their payments on account of lack of work, removal from the neighborhood, etc. These are allowed, after due notice, to withdraw the dues which they have paid on their shares, together with a portion of the profits earned by the same. These shares are canceled and the remaining portion of the profits is credited to the shares which remain in force. Finally, at the end of a certain number of months it is found that the installment dues paid in, added to the premiums on loans, interest, penalties for nonpayment of dues, and the portion of profits withheld from withdrawing members, amount to sufficient to give to each share a value of \$200—the maturity value. The business of the association is then terminated, each holder of a free or unpledged share receiving the sum of \$200, and each holder of pledged shares, or shares on which loans have been made, receiving in lieu thereof his canceled mortgage. The above description applies to the primitive plan of association, known as the terminating, under which the association carried but a single series of shares and disbanded at their maturity. While this plan has been almost entirely superseded by others, all of which will be described later on, it serves to illustrate the fundamental methods which obtain in all local building and loan associations, and shows the purely cooperative character of these institutions which furnish loans of money to those desiring to build or purchase homes, and at the same time afford the nonborrower not only a safe means of accumulating small savings, but also a greater profit on the same than could perhaps be secured by any other means equally safe.

FUNDAMENTAL PRINCIPLES.

In any consideration of the fundamental principles which underlie these institutions, it is necessary to keep in mind what has been said as to the purposes and methods of operation of the earlier associations. Many changes in method have been adopted from time to time in order to meet new conditions and new needs, but the purposes have remained the same in every important particular. In the language of the law of one of the States these are “to encourage industry, frugality, home building, and saving among its members; the accumulation of saving, the loaning of such accumulations to its

members, and the repayment to each member of his savings when they have accumulated to a certain sum, or at any time when he shall desire the same, or the association shall desire to repay the same."

The most important principle involved in the workings of the earlier associations is probably that of cooperation between men of limited means for the purposes above specified. The restriction of membership to persons residing in the city or town in which the association was located is an important principle, as is also the like restriction of loans. The localization of membership made possible a close cooperation and promoted individual interest in the financial success of the business of the association, while the localization of investments made possible a personal knowledge on the part of all members of the security offered for loans, and in this way contributed largely to the safety of their periodic contributions to the funds of the association. The interest of members was still further enhanced by the fact that their presence at all meetings of their directing officers was permitted and encouraged. The importance of this active cooperation in the work of the association should be emphasized. Not only was cooperation practiced in the distribution of the purely financial returns of the association, but all members were encouraged to cooperate, to some extent at least, in the administration of its business through their presence at the meetings of its officers. All these meetings were open to shareholders and were held at regular intervals at some place convenient to all. Another principle common to the earlier associations was the restriction of loans to their shareholders. It was required that borrowers either be shareholders or become so before a loan was made. The privilege of borrowing from the association belonged to every shareholder who could furnish adequate security. The funds of the association were loaned at stated times, and each member was given due notice of the same. In order to determine the right of one member over another to loans from the association, the funds were put up at auction and loaned to the member bidding the largest premium above the legal rate of interest. Members joining the association at any time after the date of issue of a series of shares were required to pay back dues and interest on such shares as were taken in order that each share in the series might be of equal value and mature at the same time. Fines for default in payment of dues on shares were also a feature of the association, and withdrawing shareholders were paid the dues paid in on the shares to their credit, together with a portion of the profits on the same, the remainder being retained by the association for distribution among those shareholders who remained in the association until such time as their shares matured. All of its officers, except the secretary-treasurer, served without pay, thus reducing the expenses to a minimum. In the dis-

tribution of profits every share participated equally and impartially in the funds in the treasury from whatever source derived.

The above are, in brief, the basic principles upon which the earlier associations carried on their business. As stated before, these fundamentals, to a great extent, underlie most of the modern associations, but in many cases variations have been adopted from time to time in order to meet the necessities which have arisen and give the same beneficent results under new conditions. The main features will be taken up in detail and their variations noted.

PLANS OF ISSUING SHARES.

A primary distinction between building and loan associations is based on their plans of issuing shares. The earlier associations operated under what is termed the terminating plan, but this has in modern associations given way almost entirely to the serial and permanent or perpetual plans. The following description of the terminating and serial plans has been taken from Judge Seymour Dexter's work, entitled "A Treatise on Cooperative Savings and Loan Associations:"

Terminating plan: In the primitive building associations of Philadelphia there was but a single series of stock issued; every person taking shares of stock, subsequent to the date of the first issue of shares, was obliged to pay back dues in order to be in the same position he would have been had he taken his stock at the date of the first issue, so that each shareholder paid the same amount per share into the association regardless of the time when he took his shares. The money was loaned only to shareholders. Inasmuch as only one series of stock was issued the lifetime of the association was limited to the time that it took for the shares to reach their matured value. This scheme necessarily involved the condition that every shareholder remaining in the association at the time the stock matured must be a borrower to the amount of the matured value of shares held by him. Let us make this clear. Suppose the charter of the association limited the number of shares it could issue to 500, and that during its lifetime it had issued that number. After the payment of its running expenses the funds received could be used for only two purposes, namely, the making of loans to its own members and paying shareholders who withdrew. Suppose that of the 500 shares issued 300 had been withdrawn, leaving 200 outstanding when attaining their matured value. Assume the shares were \$200 each at their matured value. Now, 200 shares at \$200 each is \$40,000. Before the shares can be matured the association must have \$40,000 of assets. The assets consist of the money due from the shareholders to the association upon loans. As no shareholder can borrow a larger sum than the matured value of the shares held by him, it follows that no shareholder can owe the association for borrowed money a larger sum than the association will owe him when his shares of stock have matured; therefore, each shareholder must owe the association a sum equal to that which the association will owe him upon his matured shares. The only limitation

or exception to this statement of the case will arise in reference to the dues paid at the last meeting. The amount of those dues will not have been borrowed and will be due to some shareholder or shareholders in excess of the amount owing by him or them to the association.

But as the association progresses from year to year toward the maturity of its stock, it might not happen that there are shareholders who desired to borrow. What then? It would not do to have the dues paid in from month to month remain uninvested; no profits would accrue, and the result would be unsatisfactory. Under the scheme of a single series the association has the power to compel shareholders to borrow the funds. They are called forced loans, and their articles of association and by-laws determine who should become the borrower when there are no shareholders wishing to borrow.

This scheme is known as the terminating plan. It involves three serious defects which it was very desirable to obviate, namely, the dissolution of the association when the stock matured, the large amount of back dues which the new stockholder would have to pay who took stock after the association had been running for some time, and, lastly, the making of forced loans—that is, compelling the shareholder to become a borrower whether he wanted to do so or not.

Serial plan: To overcome these defects the serial scheme was developed. Under this scheme a new series of stock was issued at the beginning of each fiscal year, or half-yearly. In some instances series have been issued quarterly, and even oftener.

This is known as the serial plan. This change in the scheme obviated two of the defects in the single-series scheme. It permitted the association to become perpetual, and it furnished a new series of stock so often that one taking stock at any time in the current series did not have a large amount of back dues to pay to place him in the same situation that he would have been had he taken his shares at the first. As a matter of practical experience the serial plan also obviates, except in rare cases, the third defect. It permits of the accession of new stockholders, who become such for the express purpose of becoming borrowers. In the single-series scheme, when an association had become two or more years old, the amount of back dues that they would have to pay on their stock in order to become shareholders, so that they might become borrowers, was a serious obstacle; while under the serial plan the amount was not large at any time. In a well-managed association, having the confidence of the community, there is usually no difficulty in finding those who wish to borrow the funds. But the scheme provides a mode to obviate an accumulation of funds that can not be loaned by providing a mode for compelling withdrawals. In the serial scheme it is deemed advisable, when a series matures, to have but comparatively few outstanding free shares.

Hence it is deemed a wise policy to encourage withdrawals in series approaching maturity. This is accomplished by increasing the percentage of profits which the withdrawing shareholder is allowed as the series approaches its maturity.

In addition to this policy many associations have provided that the withdrawal of stock may be compelled after a series has attained a certain number of years. In the case of a compulsory withdrawal the shareholder is allowed all the profits. The scheme of the Massachusetts cooperative banks has this provision, the number of years being

placed at four or more. The scheme of the New York cooperative savings and loan associations has the same provision, and places the age of the series at four years or more.

While it is wise to thus provide a mode for compelling withdrawals, if necessity requires it, to prevent the accumulation of uninvested funds, there will seldom be occasion for an association to avail itself of the provision.

The single series, or terminating plan, has been almost wholly abandoned in localities where these associations have been in operation long. Most of those that remain in such localities were formed years ago, and have not had time to run their course to a natural dissolution by the maturing of their stock.

In some cases where an association is formed upon the serial plan, each series has been conducted separately, as though it was the only series of stock the association had outstanding, thereby making, in effect, as many terminating associations running under one management as there are series issued. This cumbersome mode of conducting the business has arisen from the fact that those who organized and conducted the association did not fully comprehend the proper mode of conducting the business in cases where all the series are run together, forming, in effect, a partnership.

Permanent or perpetual plan: It has been seen that under the terminating plan but one series of shares is issued, each of which is at all times of equal value. When these have matured and been paid off, the business of the association is ended and it is disbanded. The serial association is composed of a series of issues made at stated intervals, and each shareholder in a given series is in practically the same position as regards the other shareholders in that series as if he were a member of a terminating association. In effect, a serial association is composed of a number of terminating associations beginning at stated intervals. Under the permanent or perpetual plan stock is issued whenever called for, and there is no necessity, therefore, for the payment of back dues and interest, as is the case in the terminating and serial plans. Each shareholder is in a class by himself and begins his periodic payments when his stock is issued and continues the same until its maturity. This plan in its latest development has been termed the "Dayton plan," owing probably to its origin in the city of Dayton, Ohio, where several of the largest and most successful associations in the country are conducted on that plan. At the date of the investigation of the Department of Labor relative to this subject in 1893 the general manager of one of these associations furnished the Department the following description of that plan:

In the first place it must be noted that the plan is applicable to permanent associations only, and can not be applied to either terminating or serial associations.

The plan differs from other plans in four main particulars, besides some minor ones.

- First. New members may join at any time without paying back dues.
- Second. Paid-up stock is issued.

Third. Premium is entirely abolished, each member being entitled to borrow money in the order of his application at such rate of interest as the board of directors may from time to time fix.

Fourth. Earnings are not only ascertained and divided semiannually, but when credited are subject to withdrawal the same as money payments.

I will take them in their order. As a preliminary observation, however, I might say that the main object of all these changes has been to simplify methods and to enable the association to more easily adjust itself to the situation and needs of the various people with whom it deals. All the older plans are more or less ironclad. Very little attempt is made at elasticity or to accommodate the individual member; on the contrary, the member is required to adjust himself to the association. He must join not when he wants to, but when he can. He can not pay his money in when he gets it, but when the association is ready to take it. If he wants to borrow money the association, through the medium of premium ascertained by competitive bids, so complicates matters that he is wholly unable to calculate the rate of interest he is to pay; and finally, if through misfortune or sickness he is compelled to quit before his shares mature, his rights are enveloped in mist, and he is generally compelled to suffer a forfeiture which embitters him ever after.

First. A member may join at any time. This is accomplished by substantially making each man's stock a separate series. The theory of this is plain enough, the difficulties which suggest themselves being merely the keeping of the books and the division of earnings, both of which will be explained later on.

Second. Paid-up stock is issued. This is a decided innovation. The old theory being that in all cases when stock matured the member was paid in cash and the stock canceled. It is not issued at all times, but only when the society can profitably loan the money. It may be called in also if a glut of money occurs. It is entitled to share in the earnings like other stock, but dividends when declared, instead of being credited on the book as in the case of running stock, are paid in cash. It may also be withdrawn the same as running stock. In fact, barring the fact that it pays no dues and receives dividends in cash, it has substantially the same rights and liabilities as running stock.

Paid-up stock, however, is an exceedingly useful adjunct to a building association. It gives the association command of a large additional amount of money to loan and thus reduces the rates to borrowers. This class of stockholders is also a little steadier than the bookholders. They are not so easily panicked, nor are they so needy as to require their money at once in case of a stringency in finance or a business depression.

Paid-up stock is also a sort of financial regulator to an association. When money is too plenty, not being obliged to issue it, the doors are closed and a large source of supply is thus shut off. If this does not suffice even outstanding stock may be called in. When, however, the demand for money becomes greater than the supply, paid-up stock being a favorite investment, the association has but to open the gates and money pours in until the equilibrium is restored. By these means the idle cash balance of the association is kept continually small, and yet all really desirable loans can be made, and all other demands promptly met. It must not be supposed, however, that this paid-up

stock is held entirely or even largely by capitalists. On the contrary, it is held almost entirely in small sums by the more frugal element in the working classes. In the annual report of the association heretofore referred to, made on January 1, 1893, 2,411 persons appear as holding \$867,700 of this stock, or an average of \$359.89 per person, while of the whole 2,411 certificates outstanding, 822 were for \$100 only.

Third. Probably the most pronounced difference, however, between the Dayton plan and others is in the method of loaning money. Instead of selling at auction to the highest bidder in open meeting the right to borrow money, it is loaned to members at a rate of interest fixed by the board of directors, on the principle of "first come, first served."

The following is a copy of the contract signed by the borrower, which I think will largely explain itself. (For convenience I make it a loan of \$100, and suppose the rate of interest agreed upon is 13 cents per week):

"\$100.00.

"DAYTON, OHIO, —, —.

"Received as a loan from the Mutual Home and Savings Association, of Dayton, Ohio, the sum of one hundred dollars, which sum I agree to repay with 13% dollars per week interest thereon, payable weekly, as follows:

"I hereby subscribe for one share of stock in said association, of one hundred dollars each, book No. 34,641, and I agree to pay to said association weekly, not less than the sum of $\frac{25}{100}$ dollars, which sum is to be applied as follows:

"First. To the payment of any fines, insurance, taxes, or other assessments made against me in accordance with the by-laws of said association.

"Second. To the payment of the interest due on said loan.

"Third. The balance of said amount to be applied toward the payment of my said stock subscription. Said weekly payments shall be continued until said stock is fully paid up by the payments applied thereto as above stated, and the dividends declared thereon. I also hereby assign the stock aforesaid to said association as collateral security for said loan, and I authorize it, when said stock is fully paid up, or should I fail for eight weeks to make the payments above stated, at its option to withdraw said stock in accordance with the by-laws of said association, or any or all of the money paid thereon, and apply the amount withdrawn to the payment of said loan, or the interest thereon, or any of the assessments above stated.

"Should any part of said loan or the interest thereon or any of said assessments remain unpaid after the withdrawal value of said stock is so applied, they shall become due and payable at the option of said association.

"Signed: ————" (a)

"This form of contract has been changed somewhat since the date of the above statement in 1893. The present form of contract is as follows:

"§ ———"

"DAYTON, OHIO, ———, 190—.

"Received as a loan from the Mutual Home and Savings Association, of Dayton, Ohio, of which association I am a member, ——— dollars, which, together with the interest and such taxes, assessments, and insurance as are in default, I promise and agree to repay at the office of said association in Dayton, Ohio, in installment payments of not less than ——— dollars per month, on or before the fifteenth

It will be seen that the loan, so far as it is concerned, is a plain loan at a definite rate of interest, and that the stock which the borrower subscribes for is used as a sort of sinking fund in which to accumulate the money with which to pay the loan. When the money in the fund is sufficient to pay the loan—that is, when the stock matures—the money is transferred from the stock to the loan and the latter is canceled. While the money is being accumulated on the stock it is entitled to its share of the earnings just as other stock.

It will be observed that the required weekly payment is even 25 cents on each share of \$100. The borrower does not pay as in the old associations 25 cents as his dues and an additional sum for interest, fines, etc. Twenty-five cents per week pays the whole bill. The interest, etc., is taken out of it, and the balance, whatever it is, becomes a credit on his stock. No matter what rate of interest is agreed upon or what fines or other assessments are made, the weekly payment remains the same. The rate of interest merely shortens or lengthens the time it will take to mature the stock and cancel the loan. A borrower therefore knows exactly what he has to pay from the start to the finish. You will observe also that the weekly payment required is a minimum payment. The borrower may therefore pay as much more as he is able. Whatever payment he makes draws dividends and shortens the time in which his loan will be paid up. It is not expected that every borrower will simply pay the required dues. The minimum payment is made as low as is consistent with safety, and the field is left open for each man to pay off his loan as soon as he can. He may, therefore, pay it up in five years, or one year, or even in one week, if he wishes. For the same reason he may pay off his loan at any time whatever. The minimum payment only being fixed, he may pay at the time the whole balance due on the loan and have it canceled, paying interest of course only up to the date of cancellation. A borrower may also, at any time pay up one or more of his shares, and have the amount credited on his loan and interest stopped to that extent.

Fourth. As to the distribution of earnings: Under this plan it is a very simple matter. Every six months the earnings are ascertained. As they consist almost entirely of interest paid, this is soon done. Out of this first comes the expenses. Then the Ohio law requires that 5 per cent be set aside to a fund out of which all losses are paid (when.

day of each calendar month, during its continuance, said payments by this agreement shall be entered on Loan Book No. O and the aggregate of the same applied on the last day of June and December during the continuance of the loan, as follows:

"First. To the payment of the interest on said loan for the six months, or fraction thereof, at the rate of ——— per centum per annum.

"Second. To the payment, at the option of said association, of such taxes, assessments, or insurance as may be in default on property pledged to secure this obligation.

"Third. The balance of said amount to the payment to that extent and as a credit of that date, on the principal of this note.

"All unpaid installments shall bear interest at the rate of seven per centum per annum from the time same are due until paid.

"After two monthly installments become due and are unpaid, then the whole amount of principal and interest shall become due and payable, at the option of the association, and the mortgage or other security enforced for the payment thereof.

"It is agreed and understood that at any time after one year from the date hereof the whole amount then unpaid on this loan shall, at the option of said association, become due and payable and the mortgage or other security enforced for the payment thereof.

"Signed: ——— ———."

however, this fund reaches 5 per cent of the outstanding loans this is no longer required). The balance is then divided among all the members in proportion to the amount standing to the credit of each member. The amount standing to the member's credit at the beginning of the six months, unless since withdrawn, is the basis of the distribution, but an allowance is also made to members on the required payments made since that time. On all running stock this dividend is credited to the member's account, and thereafter is regarded just the same as money paid. On all paid-up stock the dividend is paid in cash. The exact money value of each man's stock being thus ascertained at the close of each six months, the matter of withdrawals is also made easy. The amount in the loss fund represents the risk in the outstanding loans. Every man's account is therefore worth its face. He is, therefore, allowed to withdraw any or all of the amount standing to his credit, dividends and all, by giving two weeks' notice, provided the money is in the treasury. If it is not, his notice is filed and he is paid in his order as fast as the money comes in.

It will be further observed that in the above method of ascertaining and dividing the earnings the number of shares a man holds cuts very little figure. The money paid in on them is the basis of the calculation for dividends. This has a most important side effect. The money actually paid in by a member, not what he ought to have paid, as in the older plans, is the basis of dividends. It is, therefore, no longer necessary to insist that a member, not a borrower, should make the payments his shares call for. No attention is, therefore, paid as to whether a nonborrower pays up or not. If he does not it is own affair; nobody but himself is the loser. Neither are fines ever assessed on the nonborrower. No attention is paid to him except to adjust his dividend in accordance with his payments. The effect of this has been surprising. Nobody can estimate the number of people who have been deterred from joining building associations by the fear that they might not be able to keep up their payments after they were in, and would be fined and otherwise mulcted in consequence. They were the very best and most prudent people, too. The ignorant and the thoughtless may be induced to assume burdens which they are not sure they can carry, but the intelligent and the thoughtful will hesitate. At any rate this fact, together with the ease and certainty with which money may be withdrawn, and also the further fact that no initiation fee is required, has led to a regular stampede to join building associations in the city of Dayton. Over 10 per cent of all the people in the city, men, women, and children, belong to this one association alone, and there are a number of other good associations also.

The popularity of these associations in Dayton can not be better illustrated than by comparing the population of the city with the number of members of the various associations. The population of the city in 1890 was 65,500. It has been growing rapidly since, but an outside estimate would hardly give it over 80,000. The membership in the various associations on January 1, 1893, was 19,886. Of course, in a few instances the same person is a member of more than one association, but, nevertheless, the figures are almost startling. Probably more people belong to such associations in the city of Dayton in proportion to its size than in any other city in the world.

The rule as to fines need not be so strictly enforced even against borrowers as is necessary under the old plans. The borrower gets credit

for only what he pays, and if the security is ample the society suffers no pecuniary loss if he does not pay promptly. Consequently, fines are seldom assessed to any great extent. The association before named collected only \$160.30 in fines in 1892, although its gross receipts were over \$1,800,000.

It only remains for me to answer some queries which will naturally arise as to the bookkeeping. It is undoubtedly true that in small associations the labor of keeping the books is somewhat increased under this plan, as an individual ledger account must be kept with each member. On the other hand the books are ever so much better even in a small association, and it is wholly impossible to keep correct books in an association of any size under the old plans. It is almost impossible to give any satisfactory explanation of the methods of bookkeeping in any reasonable space. They must be seen to be understood. In general, however, a weekly payment journal similar to those always in use is kept, in which is entered all payments in the proper column for the current week and opposite the name of the member. It is ruled to last six months, and at the end of that time the amount paid is transferred or posted to the individual account of the member in the ledger. There is, however, this difference: The weekly payment of the borrower is not separated into dues, interest, fines, etc., in this journal. Only the bulk sum paid is entered. The interest, fines, etc., are charged every six months to the borrower's individual account in the ledger, and when, at the end of the six months, the bulk sum of his payments is also posted to his account, a balance is struck. This is an enormous saving in bookkeeping and in handling cash. The weekly payment is the same for both borrower and nonborrower, being 25 cents on each share of stock. It is even money also, and avoids the handling of much small change as is necessary when the payment is separated each week, the interest nearly always comprising odd cents. The semiannual dividend is credited to each man's account in the weekly journal as the first payment of the six months. Of course many other minor details are not touched upon, but they are only such as would naturally suggest themselves to a bookkeeper. In a large association a greater subdivision of accounts can be made, each with its appropriate book, and intricacy be thus further avoided.

In 1893 it was found that of the 5,598 local associations 13.6 per cent were operating under the terminating, 56.6 per cent under the serial, and 29.8 per cent under the permanent plan; while of the 240 national associations, 0.4 per cent were operating under the terminating, 57.5 per cent under the serial, and 42.1 per cent under the permanent plan. Combining the figures for both local and national associations, it was found that 13 per cent of all associations were operating under the terminating, 56.6 per cent under the serial, and 30.4 per cent under the permanent plan. While no figures are available from which similar information for later years can be gained, it is probable that the terminating plan has practically disappeared and that the proportion of associations operating under the permanent plan has increased to some extent.

PLANS OF MAKING LOANS.

The membership of building and loan associations, so far as the investment of their funds is concerned, is composed of two classes—borrowers and nonborrowers. Borrowing members, however, are usually in the minority. The Department of Labor in its investigation in 1893 found that about 30 per cent of the shareholders in local associations were borrowers, the remainder holding their shares purely as an investment. These loans made to shareholders are of two kinds—real estate and stock loans. Real-estate loans are those made upon real estate, and are usually secured by a first mortgage on the property in addition to the pledge of his stock by the borrowing member. Stock loans are those made upon shares of the association, such shares being held by the association as security for the repayment of the loan, together with such other security as may be demanded and given. Loans on real-estate security are by far the most numerous in these associations. Practically all associations have loans of this character, while a large number of associations have no stock loans. Of the 5,598 local associations covered by the investigation of 1893, but 21 had no real-estate loans, while 2,150 reported that they had made no loans on shares. This investigation also developed the fact that in some associations a third class of loans was made—those on other securities than real estate or stock. It was there shown that of the \$443,861,241 of loans made by local associations, \$422,313,725, or 95.1 per cent, were on real estate; \$15,880,663, or 3.6 per cent, were on stock of the association; while \$5,666,853, or 1.3 per cent, were on other securities. It is seen from these figures that a very large proportion of the loans made by these associations are for the purpose of enabling their members to acquire homes. Of the 5,598 local associations found to be in operation in 1893, 4,272 reported as to the number of homes acquired, while 4,250 reported as to the number of other buildings acquired by borrowers during the existence of the associations. The number of homes reached the very large figure of 290,803, while the number of other buildings acquired was 26,061.

Loans are almost invariably confined by associations to their own shareholders. In some cases, however, where there is no demand for money on the part of their shareholders, associations provide for loaning their funds to persons other than shareholders upon such terms and conditions as may be approved by their boards of directors. An effort was made by the Department of Labor in 1893 to ascertain the extent to which this practice obtained. It was found that in the 2,200 local associations reporting as to this feature, but 76, or 3.5 per cent, carried loans of this character. The number of loans so made was

2,056, and the amount involved \$2,328,621, the average size of the loans being \$1,133.

The repayment of loans is secured to associations by mortgages on real estate and by a pledge of the stock held by borrowing members, or by any other security acceptable to their boards of directors. When a loan is for the purpose of erecting a house, the security required is in the nature of a mortgage upon the lot (which must usually be owned in fee simple by the borrower) and the house to be built upon it. The regular periodic payment of dues on his shares and interest on his loan is required of the borrower. In addition to this he is also required to pay regularly such proportion of the premium as the rules of the association require, unless under these rules it has been paid entirely in advance, or has been deducted in advance from the loan. Usually, the plans of associations require borrowers to acquire and pledge a number of shares of stock, the maturing value of which will equal the loan. The loan is then allowed to run to the maturity of these shares, at which time the maturing value of the shares satisfies the loan. The shares are then canceled, the mortgage released, and the real estate upon which the loan has been made becomes the property of the borrower without incumbrance. In most associations a loan may be terminated at any time by repayment, although in some it is required that the loan stand until the maturity of the shares upon the security of which it is made. Stock loans, or loans on shares held by a stockholder, are made by associations under such regulations as they may have adopted. Usually, associations will advance the full maturing value of the shares pledged, provided the borrower pledges other security acceptable to the officers of the association. In some associations, however, only the withdrawal or present value of such shares will be advanced.

The term "premium" as just used is an amount which is required of the borrower in addition to the legal interest, partly for the privilege of obtaining the immediate use of a sum equal to the ultimate maturity value of his stock and partly for the purpose of determining priority in the use of the sum which the association desires to loan. In the very beginning of the movement this method was adopted as the most satisfactory for determining to which one of a number of members a loan should be made when each one with equal right was desirous of borrowing. An association, for example, had \$1,000 which it desired to loan. If two or more members were desirous of borrowing it the amount was put up at auction and the member bidding the largest bonus in addition to the legal rate of interest was awarded the loan. If, however, but one member was desirous of borrowing, it was the general practice to make the loan without any premium whatever. While competitive bidding was the usual method adopted some

associations established a fixed premium rate, and, in these cases, loans were awarded to the members in the order of their application or by lot. Very many methods for the liquidation of this premium or bonus have been evolved, and these are usually termed "premium plans." Sixty-eight such plans relating to real estate loans were found to be in vogue in 1893 at the time of the investigation of the Department of Labor. The plans in most common use at that time will be briefly described. It is probable, however, that the greatly reduced rates of interest during recent years, together with the competition of banks, trust companies, and other large financial institutions, as well as individual capitalists, have resulted in the practical abolition of the premium in a considerable number of the largest and most active associations. In the smaller cities and towns, where money seeking investment is not so plentiful, the premium is still found in force.

Most of the sixty-eight premium plans in vogue in the 5,598 local associations covered by the report of the Department of Labor in 1893 were modifications of five or six distinct plans. Those in general use were as follows, the numbers given being those used in that report:

Plan 27: Of the 5,598 local associations in existence in 1893, 1,227, or 21.9 per cent, according to the report of the Department of Labor, were operating under this plan, which is one of the varieties of what is popularly known as the "installment plan." The earliest form of this plan consisted in dividing the premium, whether fixed or determined by bid, into a certain number of parts, usually into as many as the number of months or other periods of time the scheme of the association assumed it would take for shares to mature. These premium installments were paid periodically, usually at the same time as dues and interest. They were continued until the entire amount of the premium had been paid, after which the borrower paid only dues and interest until the loan had been settled by repayment or by the maturity of the shares. The borrower received the full amount of the loan and paid interest on the same, but the principal was reduced periodically by the dues paid in and interest was charged on the balance only. Under another variation of this plan the premium was divided into a certain number of equal parts, payable at such times as the rules of the association might require. Usually the premium was divided into a certain number of annual payments, each of which was subdivided and paid periodically, with dues and interest as an added interest rate. An arbitrary reduction in the interest rate was then made annually.

Many other variations of the installment plan were found, but the most popular was that designated as plan 27, whose operations were described as follows: Loans were awarded to shareholders bidding the highest premium. The premium bid was in the form of a certain rate per annum, or a certain amount each month or at such periods

of time as the rules of the association required. The payment of premiums either continued during the entire term of the loan or ceased at the end of a fixed period. The borrower received the whole amount of the loan and paid interest on the same. For example, a member secured a loan of \$2,000, requiring ten shares of stock, on which he had bid a premium of 10 cents per share per month. His monthly payments were as follows: Dues, at \$1 a share, \$10; interest on \$2,000, at 6 per cent per annum, \$10; premium, \$1; total payments each month, \$21. These payments continued until the loan was settled by the maturity of the shares or by repayment.

Plan 7: A plan almost equally popular, under which 1,220, or 21.8 per cent, of the local associations were operating, was that known as the "gross plan." This plan was a modification of that in vogue in the earliest associations, under which the amount of premium bid per share was deducted from its maturity value (the amount of the loan), the borrower receiving the remainder, but giving security for the gross amount and paying interest thereon. The whole of this premium was credited on the books of the association as a profit and was distributed to the shares in force at the time. No part of the premium paid in advance was returned to the borrower in case of the repayment of the loan before the maturity of the shares. As many as 575 local associations were found operating under this form of the plan (plan 6) in 1893 at the date of the investigation of the Department of Labor. Its manifest unfairness, as it affected the interests of the borrower who might desire to repay his loan before the maturity of his shares or who might desire a loan when his shares were near maturity, was a great source of dissatisfaction, the result of which was the gradual evolution of the plan involving a scheme of rebates to borrowers who repaid their loans before maturity and also to those who secured loans as their shares were approaching maturity. Plan 7 involved the correction of but one of these inequalities and is briefly described as follows:

Loans were awarded to shareholders bidding the highest premium. The premium bid was deducted from the maturing value of the shares (the total amount of the loan), the borrower receiving the remainder. He was required to give security for the gross amount and to pay interest thereon. A part of the premium deducted in advance was returned to the borrower in case of the repayment of the loan before the maturity of the shares, the amount so repaid being determined by the length of time it was assumed would be required for shares to mature under the scheme of the association. For example, a shareholder securing a loan on ten shares of a maturing value of \$2,000, at 10 per cent premium, received \$1,800 in cash and paid interest on \$2,000 at 6 per cent until his loan was satisfied. His monthly payments were as follows: Dues, \$10; interest, \$10. Assuming that his shares would mature in

one hundred months, if he repaid his loan before maturity he would be allowed a rebate of one one-hundredth part of the premium paid by him in advance for each remaining month.

Plan 1: The plan coming next in popularity, which was found in operation in 586, or 10.5 per cent, of the associations in existence in 1893, combines simplicity with the utmost fairness. Under this plan there was no auction of money or bidding for loans by members. Loans were awarded to members in the order of their applications or by lot. The borrower either made his periodic payments of dues and interest on his loan until the shares pledged for such loan reached maturity, unless the loan was previously settled, or the number and the amount of his payments were fixed by the rules of the association.

Plan 28: In 418 local associations the following plan was used: Loans were awarded to shareholders in the order of their applications or by lot. The borrower received the full amount of his loan and paid interest on the same. The premium was a certain rate per cent per annum, or a certain amount each month or at such periods of time as the rules of the association might require. For example, a member secured a loan of \$2,000 at 6 per cent interest per annum and at a fixed premium of 86, payable monthly. He pledged ten shares of stock upon which was paid monthly \$1 per share to be applied to the payment of the loan. In some cases he was also required to carry a sufficient number of additional shares, called premium stock, to be applied to the payment of the premium. This latter requirement does not, however, appear essential, as it did not in any way affect the amount or method of payments, which were each month as follows: Dues, \$10; premium, 86; interest, at 6 per cent per annum, \$10; total payments each month, \$26. Special interest attaches to this plan, as it was found in use by 136 of the 240 national associations covered by the Department of Labor in 1893.

Plan 31: An excellent plan, confined almost entirely to associations operating in the State of Ohio, provided that the premium, whether fixed or determined by bid, should be in the form of either a certain rate per cent per annum or a certain amount payable each month or at such periods of time as the rules of the association might require. The borrower received the full amount of the loan and paid interest on the same, but the principal was reduced periodically by the amount of dues paid in, and interest was charged on the balance only. For example, a member secured a loan of \$2,000 on ten shares, at a premium of 10 cents per share per month. He received the full amount of the loan and paid interest on the same. The payments each month during the first year were as follows: Dues on ten shares, \$10; interest on \$2,000 at 6 per cent per annum, \$10; premium, \$1; total payments each month during the first year, \$21. Payments each month

during the second year were: Dues, \$10; interest on \$1,880 at 6 per cent per annum, \$9.40; premium, \$1; total payment each month during the second year, \$20.40; and so on, the interest being reduced each year until the settlement of the loan. The number of associations found operating under this plan was 267, of which 224 were located in the State of Ohio. This plan, modified in some respects, was found in operation in 48 other associations.

It is but natural to assume that the ten years which have elapsed since the report of the Department of Labor, to which reference has frequently been made, have brought many changes and improvements in premium plans. The "gross plan," with its many inequalities, has practically disappeared, its use having been forbidden by the laws of many of the States. In many sections a fixed premium has obtained recognition and approbation, while the movement for the entire abolition of premiums has gradually grown in strength, some of the largest and most successful associations having adopted the plan of requiring no premium whatever.

DISTRIBUTION OF PROFITS.

More important even than the premium plan, so far as the welfare of all the stockholders of an association is concerned, is the plan adopted for the distribution of profits. The profits realized by associations at the present time consist largely of the interest on loans. Previous to the practical abolishment of some of the inequitable premium plans that obtained in the earlier years of the movement, the premiums on loans also constituted a large proportion of the profits. The exorbitant exactions from borrowers under the guise of premiums for loans has resulted, however, as has been previously stated, in the gradual lessening of this source of profit, and in many cases to its entire removal. The profits from interest on loans and from premiums are augmented to some extent by those derived from entrance fees, fines, and the proportion of profit withheld from members withdrawing before the maturity of their shares. In the enumeration of the various sources of profit, the element of careful management of the affairs of the association should not be omitted. In two associations operating under exactly similar conditions, so far as interest, premiums, etc., are concerned, it very often occurs that one will earn much larger profits for its stockholders than the other solely because of the superiority of its business management.

The investigation of the Department of Labor in 1893 disclosed the fact that as many as twenty-five different rules or methods of distribution of profits were in vogue in the associations of the country. Before proceeding to a consideration of the principal plans then found

in operation, some description of the different kinds of shares seems desirable. The following description of kinds of shares, as well as the matter descriptive of the principal plans, have been taken from the above-mentioned report:

The amount of interest which a member has in a building and loan association is indicated by the number of shares which he holds, the age of the shares, and their maturing value.

Shares are of three kinds, called installment or running shares, prepaid shares, and paid-up shares. When a member desires to make weekly, monthly, or other periodical payments, he subscribes for installment shares and indicates the amount of the periodical payments he desires to make by the number of shares for which he subscribes. These payments are continued until the installments and the profits on the shares have caused them to reach their maturing or par value, when they are wound up by returning to the nonborrowing members the value of their shares in cash, and to the borrowing members their mortgages and canceled obligations.

Prepaid shares, known also as partly paid-up shares, are issued by some associations at a fixed price per share in advance; such shares usually participate as fully in the profits as the regular installment shares, and when the amount originally paid for such shares, together with the dividends credited thereon, reaches the maturing or par value, then such shares are matured and are disposed of in the same manner as regular installment shares. A few associations, however, instead of crediting all the profits made on this class of shares, allow a fixed rate of interest on the amount paid therefor at each dividend period, which is paid in cash to the holders thereof. This interest is then deducted from the profits to which the shares are entitled, and the remainder is credited to the shares until such unpaid portion of the profits, added to the amount originally paid, equals the maturing or par value.

Some associations allow their members to pay in the full maturity or par value of their shares at any time, and a certificate of paid-up stock is then issued, and the owners thereof are entitled to receive in cash the amount of all dividends declared thereon, subject to such conditions or limitations as the board of directors of each particular association may have adopted.

In some instances these shares participate as fully in the profits as the regular installment shares; but in most cases a fixed rate of interest only is allowed, the holders of the shares usually assigning to the association all right to profits above that amount.

In some cases the holders of regular installment shares that have arrived at maturity value do not desire to withdraw their money, but prefer to leave it with the association as an investment. Associations allowing this to be done issue to holders of matured shares what are known as certificates of matured shares, which are usually governed by the same conditions as are attached to paid-up shares.

It is stated in the report that the most common as well as the most important difference between local and national associations, so far as the methods of distribution of profits are concerned, is in respect to the proportion of dues which serves as a basis for such distribution.

In local associations the total amount of dues paid in serves as this basis, while in most national associations the distribution of profits is based on only a portion of the dues, a certain portion having been carried to an expense fund which is lost to the shareholders, except in the case of such associations as transfer unexpended balances of the expense fund to the profit and loss account. In such cases there is a distribution of these unexpended balances, and these are apportioned—as is the case with profits—on only the amount of dues credited to the loan fund.

Some conception of the relation of profits to the amount of dues paid in on installment shares in force and the amount of paid up and prepaid stock may be gained by an examination of the figures given in the report. It should be borne in mind that the figures given for dues generally include divided profits and the figures for profits indicate only undivided profits—presumably profits earned during the fiscal year covered by the report. The 5,598 local associations are shown to have had liabilities of \$339,244,259 on account of dues paid in on installment shares in force and \$23,798,519 on account of paid-up and prepaid stock, a total of \$363,042,778—while their liabilities on account of profits amounted to \$74,402,969. Undivided profits of over \$20 are thus shown for every \$100 of dues and paid-up and prepaid stock. The 240 national associations, on the other hand, are shown to have had liabilities of \$30,759,219 on account of dues paid in on installment shares in force and \$9,976,847 on account of paid-up and prepaid stock—a total of \$40,736,066—while their liabilities on account of profits amounted to \$6,261,147. Undivided profits of over \$15 are thus shown for every \$100 of dues and paid-up and prepaid stock in these associations.

The description of the principal plans of distribution of profits follows, and in this description only the distribution on regular installment shares has been considered. The numbers given are those used in the report.

Plan 1. Of the 4,736 local associations in 1893 which reported as to their plans of distribution of profits 1,280, or 27 per cent, according to the report of the Department of Labor, were operating under this plan, which is described as follows:

This plan apportions the profits among series just as profits among partners are apportioned in a firm where the partners enter at different dates, each series representing a partner.

1. Multiply the dues paid in on the shares in force in each series by the equated time of investment.
2. Take the sum of these products and then find what fractional part each product is of the sum.
3. These fractions are the parts of the total net profits belonging to each series.

To illustrate the rule, let us suppose that an association whose monthly dues are \$1 per share had three series in force at the end of the third year, and that the number of shares in each series and their value per share were as follows:

First series, 500 shares, value per share \$38.87; second series, 600 shares, value per share \$25.27; third series, 400 shares, value per share \$12.32; that a fourth series of 500 shares is then issued; the net profits for the fourth year are \$3,000, and the total net profits for the four years are \$5,325. Required: The value of a share of each series at the end of the fourth year.

The first series above alluded to has run four years, or forty-eight months. Forty-eight \$1 payments have therefore been made on each share of stock. The first dollar paid has been invested forty-eight months; the second dollar paid, forty-seven months; the third dollar paid forty-six months, etc., the last dollar of the forty-eight having been invested one month. The times of investment thus form a decreasing arithmetical series, with forty-eight for the first term, one for the last term, and forty-eight for the number of terms. The total investment is thus equal to \$1 invested for 1,176 months (the sum of the series), equivalent to \$48 invested for 24½ months.

Treating the other series in the same way, we find that \$36 paid per share in the second series has been invested for 18½ months; \$24 paid per share in the third series, for 12½ months; and \$12 paid per share in the fourth series, for 6½ months; then—

$$\begin{aligned} \$48 \div 500 \div 24\frac{1}{2} &= \$588,000, \text{ first series' investment for one month.} \\ \$36 \div 600 \div 18\frac{1}{2} &= \$399,600, \text{ second series' investment for one month.} \\ \$24 \div 400 \div 12\frac{1}{2} &= \$120,000, \text{ third series' investment for one month.} \\ \$12 \div 500 \div 6\frac{1}{2} &= \$39,000, \text{ fourth series' investment for one month.} \end{aligned}$$

\$1,146,600, total investment for one month.

Hence the total net profits are divided as follows:

$$\begin{aligned} \frac{1,146,600}{1,146,600} \text{ or } \frac{1}{1} &\text{ of the total profits belong to the first series.} \\ \frac{1,146,600}{1,146,600} \text{ or } \frac{1}{1} &\text{ of the total profits belong to the second series.} \\ \frac{1,146,600}{1,146,600} \text{ or } \frac{1}{1} &\text{ of the total profits belong to the third series.} \\ \frac{1,146,600}{1,146,600} \text{ or } \frac{1}{1} &\text{ of the total profits belong to the fourth series.} \end{aligned}$$

Total profits to be divided are \$5,325.

$$\begin{aligned} \frac{5,325}{500} \text{ of } \$5,325 &= \$2,730.77, \text{ first series' share of the profits.} \\ \frac{5,325}{600} \text{ of } \$5,325 &= \$1,855.81, \text{ second series' share of the profits.} \\ \frac{5,325}{400} \text{ of } \$5,325 &= \$557.30, \text{ third series' share of the profits.} \\ \frac{5,325}{500} \text{ of } \$5,325 &= \$181.12, \text{ fourth series' share of the profits.} \\ \$2,730.77 \div 500 &= \$5.46, \text{ profit of a share of the first series.} \\ \$1,855.81 \div 600 &= \$3.09, \text{ profit of a share of the second series.} \\ \$557.30 \div 400 &= \$1.39, \text{ profit of a share of the third series.} \\ \$181.12 \div 500 &= \$0.36, \text{ profit of a share of the fourth series.} \\ \$48.00, \text{ dues paid,} &+ \$5.46, \text{ profit,} = \$53.46, \text{ value of a share of the first series.} \\ \$36.00, \text{ dues paid,} &+ \$3.09, \text{ profit,} = \$39.09, \text{ value of a share of the second series.} \\ \$24.00, \text{ dues paid,} &+ \$1.39, \text{ profit,} = \$25.39, \text{ value of a share of the third series.} \\ \$12.00, \text{ dues paid,} &+ \$0.36, \text{ profit,} = \$12.36, \text{ value of a share of the fourth series.} \end{aligned}$$

In the above example, all the net profits made during the four years have been apportioned to the several series, but some associations

apportion only each year's profits in this way. Other associations using this plan simplify the process, but obtain the same results, by dividing the total investment for one month (or for one week as the case may be), into the profits to be apportioned, for the profit on \$1 invested for one month, which is then multiplied successively by the sum of the number of weeks, months, or other periods of time for which each dollar of dues in each series has been invested. The products will be the amount of the profits belonging to a share in each series.

A few associations have been found that arrive at the same results by using the following method, which is known as Clark's plan:

1. Multiply the number of shares in force in each series by the quotient obtained by dividing the sum of the number of weeks, months, or other periods of time for which each dollar of dues in each series has been invested by the product obtained by multiplying the dues paid in on one share during the first year by the average time of investment, for the equalized results for each series.

2. Take the sum of these results and divide it into the total profits since the beginning of the association, for the rate per cent of profit.

3. Multiply the quotients already found by the rate per cent of profit, for the profit of a share in each series.

We have before seen that \$48 dues per share in the first series have been invested for $24\frac{1}{2}$ months, which is equal to \$1 invested for 1,176 months. In like manner \$36 dues per share in the second series have been invested for $18\frac{1}{2}$ months, which is equal to \$1 invested for 666 months; \$24 dues per share in the third series for $12\frac{1}{2}$ months, which is equal to \$1 invested for 300 months; and \$12 dues per share in the fourth series for $6\frac{1}{2}$ months, which is equal to \$1 invested for 78 months. The average time of first year's payments is simply half the time of investment, which is 6 months. Twelve dollars invested for an average period of six months is equal to \$1 invested for 72 months.

Then:

$$1,176 : 72 = 16.333.$$

$$666 : 72 = 9.250.$$

$$300 : 72 = 4.166.$$

$$78 : 72 = 1.083.$$

$$500 \times 16.333 = 8,166.50, \text{ equalized result for the first series.}$$

$$600 \times 9.250 = 5,550.00, \text{ equalized result for the second series.}$$

$$400 \times 4.166 = 1,666.40, \text{ equalized result for the third series.}$$

$$500 \times 1.083 = 541.50, \text{ equalized result for the fourth series.}$$

$$15,924.40, \text{ equalized result for all series.}$$

$$\$5,325, \text{ the total profits, } : 15,924.40 = 33.4392, \text{ the rate per cent of profit.}$$

$$\$0.334392 \times 16.333 = \$5.46, \text{ profit of a share of the first series.}$$

$$\$0.334392 \times 9.250 = \$3.09, \text{ profit of a share of the second series.}$$

$$\$0.334392 \times 4.166 = \$1.39, \text{ profit of a share of the third series.}$$

$$\$0.334392 \times 1.083 = \$0.36, \text{ profit of a share of the fourth series.}$$

For the value of each share, add the dues as above.

There is a modification of plan 1, which follows the same general method as that shown in the first illustration, but differs in certain particulars and gives a different result. The modification is as follows: Instead of finding the exact equated time of investment, many associations arrive at an approximate equated time by taking one-half the

number of months a series has run. Using the same data as in the above illustration, we get 24, 18, 12, and 6 as the average number of months the series have run. It is this modification that is commonly, but erroneously, called the partnership plan.

ILLUSTRATION.

$\$48 \times 500 \times 24 =$	\$576,000, first series' investment for one month.
$\$36 \times 600 \times 18 =$	\$388,800, second series' investment for one month.
$\$24 \times 400 \times 12 =$	\$115,200, third series' investment for one month.
$\$12 \times 500 \times 6 =$	\$36,000, fourth series' investment for one month.

\$1,116,000, total investment for one month.

The total net profits are then divided in proportion to each series' investment for one month, thus:

$\frac{576,000}{1,116,000}$ or $\frac{48}{93}$ of \$5,325 =	\$2,748.39, first series' share of the profits.
$\frac{388,800}{1,116,000}$ or $\frac{36}{93}$ of \$5,325 =	\$1,855.16, second series' share of the profits.
$\frac{115,200}{1,116,000}$ or $\frac{24}{93}$ of \$5,325 =	\$549.68, third series' share of the profits.
$\frac{36,000}{1,116,000}$ or $\frac{6}{93}$ of \$5,325 =	\$171.77, fourth series' share of the profits.
$\$2,748.39 \div 500 =$	\$5.50, profit of a share of the first series.
$\$1,855.16 \div 600 =$	\$3.09, profit of a share of the second series.
$\$549.68 \div 400 =$	\$1.37, profit of a share of the third series.
$\$171.77 \div 500 =$	\$0.34, profit of a share of the fourth series.

This modification of plan 1 has been simplified, the principle consisting in casting out common factors in the process of multiplication.

The first series has run 48 months; the second, 36 months; the third, 24 months; and the fourth, 12 months. The average time of investment, as we have before seen, is 24, 18, 12, and 6, respectively. Then we proceed thus:

48, age in months, $\times 24$, average time, $\times 500$ shares.
36, age in months, $\times 18$, average time, $\times 600$ shares.
24, age in months, $\times 12$, average time, $\times 400$ shares.
12, age in months, $\times 6$, average time, $\times 500$ shares.

It will be readily seen that 12 is a factor common to all the numbers of the first column, and that 6 is a factor common to all the numbers in the second column. Casting out these factors we have—

$4 \times 4 \div 500 = 8, 400.$	Hence $\frac{48}{93}$ of the total profits belong to the first series.
$3 \times 3 \div 600 = 5, 400.$	$\frac{36}{93}$ of the total profits belong to the second series.
$2 \times 2 \div 400 = 1, 600.$	$\frac{24}{93}$ of the total profits belong to the third series.
$1 \times 1 \div 500 = 500.$	$\frac{6}{93}$ of the total profits belong to the fourth series.
Total, 15,500.	

Briefly put, then, the simplification is as follows: Multiply the number of shares in force in each series by the square of the time of investment expressed in terms or periods corresponding to the intervals between the series, and then divide the profits in proportion to these products.

The foregoing simplification has been still further simplified by finding the profit of a share in each series directly, instead of finding each series' share of the profit, as follows:

1. Multiply the number of shares in force in each series by the

square of the time of investment expressed in terms or periods corresponding to the intervals between the series.

2. Divide the sum of these products into the results obtained by multiplying the total net profit by the square of the time of investment expressed as above.

The total of the products as in the last illustration is 15,500; then—

\$5,325, total profits, $\times 4 \times 4 \div 15,500 = \5.50 , profit of a share of the first series.

\$5,325, total profits, $\times 3 \times 3 \div 15,500 = \3.09 , profit of a share of the second series.

\$5,325, total profits, $\times 2 \times 2 \div 15,500 = \1.37 , profit of a share of the third series.

\$5,325, total profits, $\times 1 \times 1 \div 15,500 = \0.34 , profit of a share of the fourth series.

A share of the first series receives 16 times as much profit as a share of the fourth series; a share of the second series, 9 times as much; and a share of the third series, 4 times as much. This method, therefore, reveals the fact that, by multiplying the number of shares in force in each series by the square of the time each series has been invested, expressed in years, half years, quarter years, etc., corresponding to the intervals between the series, a correct basis of calculation is reached. These simplifications, however, are practicable only where series are issued at regular intervals, as fractions complicate the operation. This simplification is known as Rice's rule.

A few associations arrive at the same results by dividing the total investment for one month into the profits, for a rate per cent of profit, and then applying the rate to each series' investment for one month for each series' share of the profits. The process is also varied in the following manner: Find what annual rate of interest the profits are equivalent to on the amount of dues paid for one-half the time that all the dues have been invested, and apply this rate on the dues paid per share for one-half the time of the investment, for the profit of a share in any series.

Plan 9: A plan almost equally popular, in use by 1,062 or 22.4 per cent of the 4,736 local associations which reported as to their plans of distribution of profits, involved simply the equal division of the profits among all the shares in force. This plan was in use principally in terminating associations.

Plan 3: Under the plan coming next in extent of use, nearly one-half of the associations of Ohio were operating, and of the 4,736 local associations in 1893 which reported to the Department of Labor, 851, or 18 per cent, were distributing profits under this plan. Following is a description of this plan:

1. To the value of all the shares in force as declared by the last report add one-half the dues paid in during the term.

2. Divide the profits for the term by this sum for the rate per cent of profit.

3. To the value of each share as declared by the last report add one-half the dues paid in during the term and multiply the sum by the rate per cent of profit, for the profit of each share.

4. To the value of each share as declared by the last report add the dues paid in on the same during the term and the profit of each share, for the present value.

Using the same data as in the previous illustrations, the result is as follows:

ILLUSTRATION.

$\$38.87 \times .500 = \$19,435$, value of first series at last report.

$\$25.27 \times .600 = \$15,162$, value of second series at last report.

$\$12.32 \times .400 = \$4,928$, value of third series at last report.

$\$39,525$, value of all series at last report.

$\$12 \div 2 \times 2,000 = \$12,000$, one half the dues paid during the year.

$\$39,525 - \$12,000 = \$51,525$, total dividend-bearing capital.

$\$3,000$, the profits for the term, $\div \$51,525 = 5.8224$, the rate per cent of profit.

$(\$38.87 \div \$6) \times .058224 = \$2.61$, profit of a share of the first series.

$(\$25.27 \div \$6) \times .058224 = \$1.82$, profit of a share of the second series.

$(\$12.32 \div \$6) \times .058224 = \$1.07$, profit of a share of the third series.

$\$6 \times .058224 = \0.35 , profit of a share of the fourth series.

$\$38.87$, previous value, $\div \$2.61$, profit for term, $\div \$12$, dues, $= \$53.48$, present value of a share of the first series.

$\$25.27$, previous value, $\div \$1.82$, profit for term, $\div \$12$, dues, $= \$39.09$, present value of a share of the second series.

$\$12.32$, previous value, $\div \$1.07$, profit for term, $\div \$12$, dues, $= \$25.39$, present value of a share of the third series.

$\$0.35$, profit for term, $\div \$12$, dues, $= \$12.35$, present value of a share of the fourth series.

The above rule is known in some sections of the country as the third-dividend rule.

Among the numerous variations of this rule is one largely used throughout the New England States known as the Eldredge plan. It differs from the rule in that the rate per cent of profit is not computed in the usual way, but instead the division of profits is based on an assumed rate per cent. This assumed rate of profit is distributed to each share as under the rule. If a portion of the profits still remains undistributed the profit per share is increased by one-half per cent, one-fourth per cent, etc., according to the amount of profit remaining.

To illustrate the plan, suppose the last annual report shows a share of a given series to be worth $\$38.87$, and that a rate of 6 per cent is assumed.

$\$38.87 \times .06 = \2.33 , profit on previous value at the assumed rate.

$\$6.00 \times .06 = \0.36 , profit on one-half of the dues at the assumed rate.

$\$2.69$, total profit of the share at the assumed rate.

The same computation is made upon all the shares in force of the existing series, which gives the total profit of all shares in force at the assumed rate, 6 per cent. If, after deducting this profit from the total profits, it is found that the profits are sufficient to allow $6\frac{1}{2}$ per cent instead of 6 per cent, the profit per share is increased one-twelfth; if sufficient to allow 7 per cent the profit per share is increased one-sixth, etc.

Plan 6. Under this number is described the plan in use by 449, or 9.5 per cent of the 4,736 local associations which reported as to their plans of distribution. This plan was especially popular in the State of New York, a very large proportion of the associations of that State distributing profits in accordance therewith.

1. Divide the net profits for the term by the total amount of dues paid in on all the shares in force, for the rate per cent of profit.
2. Multiply the total dues paid in on one share of each series by the rate per cent of profit, for the profit on one share.

Using the same data as before the result is as follows:

ILLUSTRATION.

$\$48 \times 500 = \$24,000$, total dues paid in first series.

$\$36 \times 600 = \$21,600$, total dues paid in second series.

$\$24 \times 400 = \$9,600$, total dues paid in third series.

$\$12 \times 500 = \$6,000$, total dues paid in fourth series.

$\$61,200$, total dues in all series.

$\$3,000$, the profits for the term, $\div \$61,200 = 4.9019$, the rate per cent of profit.

$\$48 \times .049019 = \2.35 , profit of a share of the first series.

$\$36 \times .049019 = \1.76 , profit of a share of the second series.

$\$24 \times .049019 = \1.18 , profit of a share of the third series.

$\$12 \times .049019 = \0.59 , profit of a share of the fourth series.

$\$38.87 \div \$2.35 \div \$12 = \53.22 , value of a share of the first series.

$\$25.27 \div \$1.76 \div \$12 = \39.03 , value of a share of the second series.

$\$12.32 \div \$1.18 \div \$12 = \25.50 , value of a share of the third series.

$\$0.59 \div \$12 = \$12.59$, value of a share of the fourth series.

$\$2.00$, profits undivided.

This rule is known in some sections of the country as the second dividend rule.

Plan 4: Of the 4,736 local associations reporting, 287, or 6.1 per cent, distributed their profits under the plan which is described as follows:

1. To the value of all the shares in force as declared by the last report, add the equated amount of dues paid in during the term.
2. Divide the profits for the term by this sum, for the rate per cent of profit.

3. Multiply each share's investment by the rate per cent of profit, to find the gain on one share.

Using the same data as before the result is as follows:

ILLUSTRATION.

$(\$38.87 \div \$6.50, \text{equated dues}) \times 500 = \$22,685$, dividend bearing capital of 1st series.

$(\$25.27 \div \$6.50, \text{equated dues}) \times 600 = \$19,062$, dividend bearing capital of 2d series.

$(\$12.32 \div \$6.50, \text{equated dues}) \times 400 = \$7,528$, dividend bearing capital of 3d series.

$\$6.50$, equated dues, $\times 500 = \$3,250$, dividend bearing capital of 4th series.

$\$52,525$, dividend bearing capital of all series.

$\$3,000$, the profits for the term, $\div \$52,525 = 5.7115$, the rate per cent of profit.

$(\$38.87 \div \$6.50) \times .057115 = \$2.59$, profit of a share of the first series.

$(\$25.27 \div \$6.50) \times .057115 = \$1.81$, profit of a share of the second series.

$(\$12.32 \div \$6.50) \times .057115 = \$1.07$, profit of a share of the third series.

$\$6.50 \times .057115 = \0.37 , profit of a share of the fourth series.

$\$38.87 \div \$12 \div \$2.59 = \53.46 , value of a share of the first series.

$\$25.27 \div \$12 \div \$1.81 = \39.08 , value of a share of the second series.

$\$12.32 \div \$12 \div \$1.07 = \25.39 , value of a share of the third series.

$\$12 \div \$0.37 = \$12.37$, value of a share of the fourth series.

$\$6.00$, profits undivided.

This rule is known as Dexter's rule.

Some associations arrive at the same results by using the following method: 1. To the value of the shares in force in each series as declared by the last report, add the equated amount of dues paid in each series during the term, and multiply each sum by the number of months in the term, for each series' investment for one month. 2. Find the sum of these products, which gives the entire capital invested for one month, and then divide the profits of the term in the same proportion, that each series' investment for one month bears to the entire capital invested for one month, for each series' share of the profits. 3. Divide the profits of each series by the number of shares therein, for the profit of one share.

The process is also varied in the following way: The total investment for one month is divided into the total net profits for a rate per cent, which is applied to each series' investment for one month, for the profit of each series.

Plan 2: Of the 4,767 local associations reporting, 256, or 5.4 per cent, distributed their profits under the following plan:

1. Give to each series, except the last, interest at the legal rate upon the value of the shares in force as declared at the last report.
2. Deduct this interest from the profits for the term and divide the remainder equally among all the shares.

Assuming that 6 per cent is the legal rate, and using the same data as in the illustration of plan 1, the plan is worked out as follows:

ILLUSTRATION.

- $$\begin{aligned} \$10.47 \times .06 &= \$2.32, \text{ interest on one share of the first series.} \\ \$25.27 \times .06 &= \$1.52, \text{ interest on one share of the second series.} \\ \$12.32 \times .06 &= \$0.74, \text{ interest on one share of the third series.} \\ \$2.32 \times 500 &= \$1,160, \text{ interest belonging to the first series.} \\ \$1.52 \times 200 &= \$302, \text{ interest belonging to the second series.} \\ \$0.74 \times 400 &= \$296, \text{ interest belonging to the third series.} \end{aligned}$$

— — — — —
\$2,377, total interest belonging to the old series.

\$3,666, the profits for the term. \$2,377=\$627, profits remaining to be divided.

\$627 ÷ 2,000, total shares in force, = \$0.31, profit of each share.

\$10.47, previous value, + \$2.32, interest, + \$0.31, profit, + \$12, dues, = \$33.51, value of a share of the first series.

\$25.27, previous value, + \$1.52, interest, + \$0.31, profit, + \$12, dues, = \$39.10, value of a share of the second series.

\$12.32, previous value, + \$0.74, interest, + \$0.31, profit, + \$12, dues, = \$25.37, value of a share of the third series.

\$0.31, profit, + \$12, dues, = \$12.31, value of a share of the fourth series.

Undivided profits, \$7.

This is known as Wrigley's rule.

Many associations using this plan of distributing profits allow a higher or a lower rate of interest than the legal rate, but no separate classification of such associations has been made.

Plan 5. Of the 4,736 local associations reporting, 203, or 4.3 per cent, distributed profits under this plan, which is described as follows:

1. To the previous value of a share in each series add the dues paid in during the term, and multiply the sum by the number of shares in the series.
2. Add these products and then divide the sum into the profits for

the term for the rate per cent of profit. Using the same data as in the preceding illustrations, the rule is worked out as follows:

$(\$38.87 + \$12) \times 500 = \$25,435$, dividend bearing capital of the first series.
 $(\$25.27 + \$12) \times 600 = \$22,362$, dividend bearing capital of the second series.
 $(\$12.32 + \$12) \times 400 = \$9,728$, dividend bearing capital of the third series.
 $\$12 \times 500 = \$6,000$, dividend bearing capital of the fourth series.

$\$63,525$, dividend bearing capital of all series.

$\$3,000$, the profits for the term, $\therefore \$63,525 = 4.7225$, the rate per cent of profit.

$\$25,435 \times .047225 = \$1,201.17$, the first series' share of the profits.

$\$22,362 \times .047225 = \$1,056.05$, the second series' share of the profits.

$\$9,728 \times .047225 = \459.40 , the third series' share of the profits.

$\$6,000 \times .047225 = \283.35 , the fourth series' share of the profits.

$\$1,201.17 \div 500 = \2.40 , profit of a share of the first series.

$\$1,056.05 \div 600 = \1.76 , profit of a share of the second series.

$\$459.40 \div 400 = \1.15 , profit of a share of the third series.

$\$283.35 \div 500 = \0.57 , profit of a share of the fourth series.

$\$38.87 + \$12 + \$2.40 = \53.27 , value of a share of the first series.

$\$25.27 + \$12 + \$1.76 = \39.03 , value of a share of the second series.

$\$12.32 + \$12 + \$1.15 = \25.47 , value of a share of the third series.

$\$12 + \$0.57 = \$12.57$, value of a share of the fourth series.

$\$0.03$, profits undivided.

Plan 7: Of the 4,736 local associations reporting, 172, or 3.6 per cent, distributed profits under the following plan, which was especially popular in the State of Ohio:

1. To the amount of dues paid in on one share in each series up to the last report add one-half the dues paid in during the term, and multiply these sums by the number of shares in each series, for the dividend bearing capital of each series.

2. Add these products and divide the sum into the profits for the term, for the rate per cent of profit.

3. Multiply the dividend bearing capital of each series by the rate per cent of profit, for the profit of each series.

4. Divide the profit of each series by the number of shares in the series, for the profit of one share in each series.

Using the same data as before, we proceed thus:

ILLUSTRATION.

$(\$36 + \$6) \times 500 = \$21,000$, dividend bearing capital of the first series.

$(\$24 + \$6) \times 600 = \$18,000$, dividend bearing capital of the second series.

$(\$12 + \$6) \times 400 = \$7,200$, dividend bearing capital of the third series.

$\$6 \times 500 = \$3,000$, dividend bearing capital of the fourth series.

$\$49,200$, dividend bearing capital of all series.

$\$3,000$, the profits for the term, $\therefore \$49,200 = 6.0975$, the rate per cent of profit.

$\$21,000 \times .060975 = \$1,280.48$, the first series' share of the profits.

$\$18,000 \times .060975 = \$1,097.55$, the second series' share of the profits.

$\$7,200 \times .060975 = \439.02 , the third series' share of the profits.

$\$3,000 \times .060975 = \182.93 , the fourth series' share of the profits.

$\$1,280.48 \div 500 = \2.56 , profit of a share of the first series.

$\$1,097.55 \div 600 = \1.83 , profit of a share of the second series.

$\$439.02 \div 400 = \1.10 , profit of a share of the third series.

$\$182.93 \div 500 = \0.37 , profit of a share of the fourth series.

$\$38.87 + \$12 + \$2.56 = \53.43 , value of a share of the first series.

$\$25.27 + \$12 + \$1.83 = \39.10 , value of a share of the second series.

$\$12.32 + \$12 + \$1.10 = \25.42 , value of a share of the third series.

$\$12 + \$0.37 = \$12.37$, value of a share of the fourth series.

$\$0.02$, profits undivided.

The other 176 local associations distributed their profits under 17 different plans, some of which were grossly inequitable, and as none of these possesses any features of special merit they are not deemed of sufficient importance to be described here.

A large proportion of the associations which distributed profits under the foregoing plans modified the general rule or plan in some measure to meet the special conditions surrounding them. This was done either to simplify the work of bookkeeping or for the purpose of altering the proportion of profits to be credited to the various classes of shares. These variations are readily classified under the general rules given, and are not considered sufficiently important to be reproduced here.

Of the 176 national associations which reported their plans of distribution of profits to the Department of Labor in 1893, 81, or 46 per cent. were operating under the plan numbered 1, which has been described; 26, or 14.8 per cent. under plan numbered 6; 24, or 13.6 per cent. under plan numbered 3; 16, or 9.1 per cent. under plan numbered 4, and 13, or 7.4 per cent. under plan numbered 5. The publication of the somewhat extended descriptions of these plans taken from the above-mentioned report appears justified by the numerous inquiries for information concerning this special feature of the report, which has been out of print for several years. Further, it seems quite fair to assume that but little change in the methods of distribution of profits has occurred since 1893, in view of which fact it would appear that the value of the descriptions to interested readers would be almost as great at the present time as when they were first prepared.

WITHDRAWAL PLANS.

The principle upon which shares of building and loan associations are issued involves the regular payment of dues thereon, until they, together with the profits, amount to the maturing value of the shares. At maturity the holders of free shares, or those which have not been pledged for loans, are paid the full value of their shares, while the holders of pledged shares have their loans canceled and, if the maturing value of their shares exceeds the amount of their loan, they receive in addition in cash the difference between the value of their shares and the amount of their loan. In many cases, however, and for various reasons, shareholders find it necessary or desirable to withdraw from an association before the maturity of their shares. To meet this condition most associations have established widely varying rules under which members can retire from the association and withdraw their dues and at least a portion of the profits earned thereon. In the early days of the movement withdrawals were not permitted by most associations, and failing in the regular payment of dues, a member forfeited all payments as well as profits. Greater liberality in the matter

of withdrawals, however, very soon resulted in the establishing of rules under which all dues and a varying proportion of the profits might be withdrawn. In many associations of the present day, notably those operating under the Dayton plan, shareholders are permitted to withdraw not only all the dues which have been paid in on their shares, but also all of the profits credited to them. In most associations, however, a certain proportion of the profits on the shares of withdrawing members is retained, probably for the double purpose of discouraging frequent withdrawals and of adding to the profits of those members who continue their payments until the maturity of their shares.

To facilitate operations in connection with withdrawals associations have established two values for shares not yet matured—one being termed the holding or book value and the other the withdrawal value. The former value is calculated by adding to the dues paid in the profits which have been earned thereon, while the latter is the amount which the association under its particular plan of operation is willing to pay to withdrawing members. Provision relative to withdrawals is usually made in the constitutions or by-laws of associations. Notice of a certain number of days is usually required under withdrawal plans, but many associations do not enforce it, provided sufficient idle funds are available. It is sometimes provided as an additional safeguard that only a certain portion of the receipts shall be available for the payment to withdrawing members, in which case they are generally paid in the order of the priority of their notices of withdrawal.

At the time of the extensive investigation of the Department of Labor in 1893, twelve principal withdrawal plans were in use by associations, and while there has been since that time a growing increase in the liberality of associations in this respect, it is believed that a statement of the leading plans in use at that time will apply in all important particulars to the condition at the present time as regards this feature. Before proceeding with these descriptions of withdrawal plans it may be worth while to mention the system of forced withdrawals found in many serial associations. Under this system the accumulation of idle capital is used from time to time to arbitrarily retire the stock of nonborrowing members in the older series. This is done largely to obviate the difficulty of accumulating a large amount of funds at any one time for the purpose of paying off a series which is to mature. Inasmuch as members subject to such forced withdrawals are usually paid the full holding value of their shares, and have the privilege of subscribing to later series, no injury is done to the shareholder, and the operations of the association are greatly facilitated. These forced withdrawals have been authorized by the laws of some of the States in which associations are greatest in number and have been longest in existence.

In the descriptions of the principal withdrawal plans in vogue in 1893, taken from the ninth annual report of the Department of Labor, the payment of an annual interest on dues in lieu of a portion of the profits is involved in certain of the plans. The report describes the two methods in use in calculating this interest as follows:

First. The interest is calculated on the total amount of dues paid in for one-half the time during which they have been paid, commonly called the average time of investment; for example, in an association requiring monthly payments of dues, at the rate of \$1 per share, if 6 per cent per annum is allowed upon withdrawal, a member withdrawing at the end of one year would receive his dues, \$12, and 6 per cent interest thereon for six months, or 36 cents, making a total of \$12.36 per share. This method, on account of its simplicity, is the one ordinarily used. A few associations, however, use the following method:

Second. The interest is calculated on the total amount of dues paid in for the true average, or equated time of investment, which is ascertained by taking one-half of the sum of the extremes of the arithmetical series representing the periods of time during which the periodical payments of dues have been invested. Thus, using the illustration given above, monthly dues having been paid for twelve months, the extremes of the series representing the periods of investment of the monthly payments are 1 and 12. One-half of the sum of the extremes is $6\frac{1}{2}$, which is the true average time of investment, in months, and 6 per cent on \$12 for $6\frac{1}{2}$ months amounts to 39 cents, which, added to the dues paid in, gives a withdrawal value of \$12.39 per share at the end of one year.

Plan 2: Of the 5,501 local associations reporting as to their withdrawal plans, 1,740, or 31.6 per cent, were operating under this plan, which is described as follows:

Withdrawing shareholders receive the dues paid in and a fixed rate of interest per annum on such payments.

Under this plan withdrawing shareholders receive the dues paid in on the shares upon which withdrawal is made with a fixed rate of interest thereon per annum, which varies in different associations.

Illustration: In an association in which the dues are \$1 per month per share 6 per cent interest on the dues paid in is allowed withdrawing shareholders. If a shareholder withdraws when his shares are four years old he will receive on each share upon which withdrawal is made \$48, the dues paid in thereon, with 6 per cent interest on the same for two years, the average time of investment, or \$5.76, making the total amount he will withdraw on each share \$48 plus \$5.76, or \$53.76.

Plan 11: Of the 5,501 local associations reporting, 1,640, or 29.8 per cent, were operating under this plan, described as follows:

Withdrawing shareholders receive the dues paid in and all the profits.

Under this plan withdrawing shareholders receive the dues paid in on the shares upon which withdrawal is made and, in addition, all the profits earned by or credited to such shares. In some cases interest is added on the dues paid in since the date of the last apportionment of

profits at rates varying in the different associations as follows: 3 per cent; 4 per cent; 6 per cent; 10 per cent.

Illustration: In an association in which the dues are \$1 per month per share and the profits are apportioned semiannually all the profits credited are allowed on withdrawal. A shareholder withdraws when his shares are four years old; he has paid in on each share during said four years \$48 in dues, and the profits apportioned to each share are \$8; said shareholder will therefore receive, on each share upon which withdrawal is made, \$48 plus \$8, or \$56. In case interest is allowed on the dues paid in since the last distributing period, suppose the rate of such interest to be 6 per cent per annum, and the shares upon which withdrawal is made to be four years and three months old; the dues paid in on each share are \$51, and the profits shown as credited at the end of four years, date of last apportionment, are \$8. The shareholder will then receive on each share upon which withdrawal is made \$51, dues paid in thereon; \$8, profits last apportioned, and 6 per cent interest on \$3 paid in as dues since last apportionment, which, for one and one-half months, the average time of investment, would be 2 cents, making a total of \$59.02.

Plan 10: Of the 5,501 local associations reporting, 558, or 10.1 per cent, were operating under this plan, described as follows:

Withdrawing shareholders receive the dues paid in and an arbitrary allowance of profits.

Under this plan withdrawing shareholders receive the dues paid in on the shares on which withdrawal is made with such rate of interest, portion of the profits, or specific amount as the management of the association may from time to time determine.

Illustration: In an association requiring monthly payment of dues at the rate of \$1 per share the board of directors decides, at the end of the sixth year, that the earnings have been sufficient to justify the payment to withdrawing shareholders of 6 per cent interest per annum on the dues paid in for the average time of investment. A member then withdrawing would be paid his dues, \$72, and 6 per cent interest thereon, \$12.96, making a total of \$84.96. If, instead of interest, a part of the apportioned profits is allowed and at the end of the sixth year the board of directors decides to allow 75 per cent thereof, the entire profits amounting to \$20 per share, the withdrawing shareholder would receive \$87 per share, and if, instead of either interest or a part of profits, it should be decided to pay a specific amount, as, for instance, \$10 per share, he would receive \$82.

Plan 4: Of the 5,501 local associations reporting, 347, or 6.3 per cent, were operating under this plan, described as follows:

Withdrawing shareholders receive the dues paid in and a fixed portion of the profits.

Under this plan withdrawing shareholders receive the dues paid in on the shares upon which withdrawal is made and a fixed portion, varying in different associations, of the profits apportioned to said shares.

Illustration: The maturing value of a share is \$200 and the dues per month \$1. A member whose shares are two years old has paid in on each share in dues \$24, and the profits apportioned each share are \$2; 50 per cent of such profits can be withdrawn; therefore, if

the member withdraws at the end of said two years he will receive on each share the dues paid in, \$24, plus 50 per cent of the \$2 profits, or \$1, which makes the total amount that may be withdrawn on each share \$25.

The portion of the profits allowed on withdrawal ranges in different associations from 5 to 95 per cent.

Plan 5. The plan described below was found in operation in 321, or 5.8 per cent, of the local associations reporting.

Withdrawing shareholders receive the dues paid in and a graduated portion of the profits or a graduated amount.

Under this plan withdrawing shareholders receive the dues paid in on the shares upon which withdrawal is made, with a portion of the profits apportioned to such shares, such portion being graduated according to the age of the shares. Or, instead of a graduated portion of the profits, withdrawing shareholders receive, in addition to dues, an amount which increases periodically according to the age of the shares, regardless of profits.

Illustration I: A member desires to withdraw at the end of the third year after having paid \$36 in dues. The scheme of the association provides that a member withdrawing during the first twenty-four months shall receive, in addition to the dues paid in, 75 per cent of the profits apportioned to his shares; after twenty-four months, 80 per cent; after thirty months, 85 per cent; after thirty-six months, 90 per cent; and after forty-two months, 95 per cent. The profits earned by a share at the end of the third year are \$4.06, of which the withdrawing member would receive 90 per cent, or \$3.65, which, added to the dues, gives the share a withdrawal value of \$39.65.

Illustration II: An association paying the withdrawing shareholder a graduated amount per share instead of a graduated portion of the profits allows the following rates: If the withdrawal takes place during the first year no profits are allowed; during the second year, 50 cents; during the third year, \$1; during the fourth year, \$3; during the first six months of the fifth year, \$5; during the second six months of the fifth year, \$6.50; during the first six months of the sixth year, \$8; during the second six months of the sixth year, \$10; during the first six months of the seventh year, \$12; during the second six months of the seventh year, \$14; during the first six months of the eighth year, \$16; during the second six months of the eighth year, \$18; and after the eighth year, \$20. A member withdrawing from this association at the end of the fifth year, after having paid \$60 in dues, would receive \$8 in addition to his dues, or a total of \$68.

Plan 3: This plan was found in operation in 270, or 4.9 per cent of the local associations reporting.

Withdrawing shareholders receive the dues paid in and a graduated rate of interest per annum on such payments.

Under this plan withdrawing shareholders receive the dues paid in on the shares upon which withdrawal is made, with interest thereon at various increasing rates per cent per annum, graduated according to the age of the shares.

Illustration: A member holding shares which are six years old, four years old, and two years old, respectively, desires to withdraw from

the association. He has paid \$72 per share as dues in the first class, \$48 per share as dues in the second class, and \$24 per share as dues in the third class. The conditions governing withdrawals are as follows: Shares withdrawn during the first two years receive 3 per cent per annum on the average investment; during the third year, 4 per cent; during the fourth and the fifth years, 5 per cent, and after the fifth year, 6 per cent. On each share six years old the withdrawing shareholder would receive the dues paid in by him, \$72, with interest thereon at the rate of 6 per cent per annum for the average time of investment, amounting to \$12.96, making a withdrawal value of \$84.96. On each share four years old he would receive the dues paid in by him, \$48, with interest thereon at the rate of 5 per cent per annum for the average time of investment, amounting to \$4.80, making a withdrawal value of \$52.80. On each share two years old he would receive the dues paid in by him, \$24, with interest thereon at the rate of 3 per cent per annum for the average time of investment, amounting to 72 cents, making a withdrawal value of \$24.72.

Plan 1: This plan was found in operation in 221, or 4 per cent of the local associations reporting.

Withdrawing shareholders receive the dues paid in without interest or profit.

Under this plan withdrawing shareholders receive only the dues paid in on the shares upon which withdrawal is made, the profits earned by said shares being retained by the association.

Plan 7. This plan was found in operation in 139, or 2.5 per cent, of the local associations reporting.

Withdrawing shareholders receive the dues paid in, with a fixed rate of interest thereon during a fixed period and a fixed or a graduated portion of the profits thereafter.

Under this plan withdrawing shareholders receive the dues paid in on the shares on which withdrawal is made and, if withdrawal is made within a fixed period from the date of issue of the shares, interest thereon, both the rate of interest and the length of the period varying in different associations; if withdrawal is made after the expiration of said period, shareholders receive instead of interest either a fixed portion of the profits apportioned to the shares or a portion of such profits graduated according to the age of the shares.

Illustration: In an association in which the dues are \$1 per share per month interest at the rate of 6 per cent per annum on the dues paid in is allowed the withdrawing shareholder if withdrawal is made on shares less than four years old, and thereafter, in lieu of said interest, a fixed portion of 50 per cent of the profits apportioned is allowed. If a shareholder withdraws when his shares are three years old he will receive on each share \$36, dues paid in, with interest at 6 per cent per annum thereon, amounting for the average time of investment to \$3.24, making the total amount he will withdraw on each share \$36 plus \$3.24, or \$39.24. If said shareholder withdraws when his shares are five years old, the profits earned by each share being \$15, he will receive on each share \$60, dues paid in on same, together with 50 per cent of the \$15, or \$7.50, making the total amount he will withdraw on each share \$60 plus \$7.50, or \$67.50. If instead of a fixed a graduated por-

tion of the profits is allowed after a fixed period, which is, say, 50 per cent of the profits when share is four years old, 60 per cent when five years old, 70 per cent when six years old, etc., then, at the end of the five years, he will receive on each share \$60, dues paid in on same, plus 60 per cent of \$15, or \$9, making the total amount he will withdraw \$60 plus \$9, or \$69.

The withdrawal plans of a large proportion of these associations are modified by various regulations, which in most cases reduce to some extent the amount paid to withdrawing members. Many associations require a withdrawal fee to be paid by its withdrawing members, this fee ranging in different associations from 5 cents to \$8 per share, the amount of the fee being deducted from the withdrawal value of the stock. Other modifications place a limit upon the classes of shares that are entitled to withdrawal profits, and also upon the proportion of the profits that may be withdrawn in a given year.

Of the 223 national associations reporting as to their withdrawal plan, 67, or 30 per cent, were operating under plan 2; 64, or 28.7 per cent, under plan 3; 24, or 10.8 per cent, under plan 11; 18, or 8.1 per cent, under plan 7; 14, or 6.3 per cent, under plan 4, and but a small per cent under any of the other plans described.

MATURING AND PAYING OFF SHARES.

To a serial association the liquidation of a series of shares upon maturity is one of the difficult problems that has been met in a variety of ways. The financial loss involved in the carrying for a considerable time of a large amount of idle capital in anticipation of the maturity of a series has been the principal objection to this method of disposing of the matter. The provision in some associations for the gradual liquidation of matured shares by their payment in some order, usually determined by lot, has met with great criticism because of the necessity under this plan of delaying the payment to some shareholders for many months. Unless the income of an association be extremely large it must, under this method, practically discontinue its regular loan business and set aside its entire receipts for the purpose of paying off matured stock or prolong the period of waiting for settlement for some shareholders to such an extent as to cause great dissatisfaction among stockholders and consequent injury to the association.

One of the members of the League of Local Building and Loan Associations explains the method in vogue in the Pennsylvania associations for many years as follows: As the maturity of a series approaches such portion of the funds in the treasury as is not needed for borrowing members is devoted to the purpose of paying off in advance the shares approaching maturity. The shares of nonborrowing members of the series are called in, paid off, and canceled, an opportunity being

given such members to invest in a later series. Usually in such cases the member receives the amount of dues paid in and his full share of the profits to the date of the paying off of his shares. This method is stated to have been quite satisfactory and has been mentioned heretofore in this paper as the method of forced withdrawal.

In one association the difficulty has been overcome as follows: Remembering that the pledged stock will always take care of itself, being canceled at maturity in settlement of the loan which has been made upon it, a year or more before the date of maturity the free shareholders in the series are notified that if they wish the maturity of their shares anticipated without loss of their profits, the association will make loans on the pledge of their stock. By this means a considerable portion of the free or unpledged shares are converted into pledged shares and thus taken care of. In the particular association under consideration the maturity value of the shares represented \$120,000. Of this amount \$55,000 was represented by pledged stock, leaving but \$65,000 to be taken care of. Loans of \$12,000 were made as the result of the notice to shareholders just mentioned, leaving \$53,000 to be provided for in some other manner. It was then decided to offer certificates of paid-up stock receiving its share of the earnings of the association to such shareholders in the series as did not desire payment on maturity. About \$20,000 paid up stock was thus subscribed to and issued. The balance of \$33,000 was paid in cash at the maturity of the series without disturbing the business of the association, the amount being borrowed on the security of city bonds for \$50,000 carried by the association for this purpose, the loan to be repaid out of the first surplus funds of the association.

MANAGEMENT.

One of the greatest essentials to success in a building and loan association is the good management of its business affairs. The primary consideration is of course a good plan, equitable and fair alike to the borrower and nonborrower, but an association operating under a thoroughly good plan may fail of success by reason of poor management. The government and management of the affairs of an association are usually reposed in a board of directors composed of the president of the association, its treasurer, secretary, attorney, and a certain number of its members. These officers and other members of the board of directors are elected by the shareholders at their annual meeting and their terms of office vary according to the rules of the association. This board is charged with the entire business management of the association. Upon it devolves the important duty of deciding upon security values as the basis of the association's loans, and upon its good

Michigan is reproduced in full, in order to furnish the reader with a fairly complete and detailed representative statement of the provisions enacted on the subject of local or domestic associations. As that State has no specific regulations as to the admission of national or foreign associations (i. e., those incorporated outside the State) to carry on business within the State, the law of the State of New Jersey relating to the latter class of associations, is presented.

MICHIGAN.

AN ACT to provide for the incorporation and regulation of certain corporations generally known as building and loan associations.

(Act approved March 29, 1887: Amended March 12, 1901.)

SECTION 1. Any number of persons, not less than five, who are residents of this State, desiring to organize a building and loan association for the purpose of building and improving homesteads, removing incumbrances therefrom, and loaning money to the members thereof, may, by complying with all the provisions of this act and entering into articles of association, become a corporate body. Said articles of association shall be signed by the persons associating, and acknowledged before some person authorized by the laws of this State to take acknowledgments of deeds, and shall set forth:

First, The name assumed by the association, which shall not be the same assumed by any other association incorporated under this act, nor so similar as to be liable to mislead;

Second, The purposes for which the association is formed;

Third, The amount of its authorized capital stock; the number of shares into which it is divided; the par value of each share; and the number of shares subscribed for, which shall not be less than fifty in number;

Fourth, The names of the incorporators; their respective residences, and the number of shares subscribed for by each;

Fifth, The term of its corporate existence, which shall not exceed thirty years;

Sixth, The name of the town, village or city in which such association is to be located.

SEC. 2. When executed as aforesaid, said articles of association shall be approved by, and filed with the secretary of state, and a copy thereof, duly authenticated under his hand and seal of State, shall be recorded in the office of the register of deeds in the county in which the principal office of such association is located. Upon the recording of said copy, the persons named in the articles of the association, their associates and successors, shall become a corporate body for the period for which they are organized, and shall exercise such powers as are herein granted, and such other powers as are necessary to enable such association to carry out the purpose of its organization, not inconsistent with the provisions of this act: *Provided*, That before such association shall proceed to business it shall adopt by-laws for the regulation and management of its business. Said by-laws shall not become operative until a copy thereof, duly certified by the president and secretary of the association, shall have been approved by and filed with the secretary of state.

SEC. 3. The corporate powers of every building and loan association heretofore organized under the laws of this State, or which may be incorporated under this act, shall be exercised by a board of directors of not less than five members, who shall elect from their own number the officers of the association. The mode of electing members of said board of directors and officers, and their respective terms of office, shall be prescribed in the by-laws.

SEC. 4. The secretary and treasurer of such association, and all other officers who sign or endorse checks, have charge of money or securities of such association, shall, before entering upon the duties of their office, each give such bond for the faithful performance of the same as shall be required and approved by the board of directors. Additional sureties, or such increase of said bonds as they may deem necessary, may be required at any time by the board of directors. Directors shall not be accepted as surety, and shall be individually liable for any loss sustained through their negligence or failure to comply with the provisions of this section.

SEC. 5. The authorized capital stock of such association shall be divided into shares having a par value of not less than twenty-five dollars, nor more than two hundred

of the associations it is seen on the one hand that under their rules but 1 vote was allowed to a shareholder, the object being to prevent the control of the association from resting in the hands of a few large holders of shares; while on the other hand in the other half of the associations reporting 1 vote was allowed for each share of stock held, each shareholder under this plan being given a voting power proportionate to his financial interest in the association. The objection raised by the advocates of the former plan is largely overcome, however, by the practice of associations under which the number of shares which can be held by any one person is limited. The report just referred to shows that while 2,211, or 39.8 per cent of the total number of local associations reporting (5,553), allowed an unlimited number of shares to be held by one person, 1,180, or 21.2 per cent of the associations allowed less than 25 shares to be held by one person; 682, or 12.3 per cent, allowed 25 but under 50, and 569, or 10.2 per cent, 50 but under 75. Upon the whole, there seems to be every reason to believe that the interests of the shareholder in respect to his voting privileges have been fairly conserved.

LEGISLATION AND STATE SUPERVISION.

For many years the building and loan associations in most of the States of the Union were incorporated and carried on their affairs under the general laws governing corporations. As the movement grew, however, and gained a position of financial importance, there arose the necessity for special laws to govern the organization and conduct of these institutions, and also to provide for State supervision of their operations. Quite naturally such a movement had early attracted the attention of those who saw the possibility of organizing associations without regard to the true cooperative principle under which success had been attained, purely for the purpose of enriching themselves at the expense of their shareholders. The great losses sustained by the stockholders of such associations which were organized under attractive but impossible plans, and which eventually came to certain financial wreck, greatly injured the business and reputation of the many associations which were operating under wise and equitable regulations. It was largely to meet the demands of the latter that special acts were passed in various States, not only for the purpose of encouraging the formation of these associations by granting special privileges and protecting the interests of their members by the enactment of wise and equitable rules of government, but also with a view to providing an adequate supervision of their affairs.

At the present time specific provisions are made in most of the States of the Union for the incorporation and control of both local and national building and loan associations. The law of the State of

dollars each, payable in periodical installments, called dues, not exceeding two dollars per month on each share: *Provided*, That the by-laws may provide for the advance payment of installment dues and for which there may be issued an advance payment certificate. The shares may be issued in series, or at any time as the by-laws shall determine, and subscriptions therefor shall be made payable to the association. Said shares shall be deemed personal property, transferable upon the books of the association in the manner prescribed in the by-laws, and shall be paid off and retired as the by-laws shall direct. Every share shall be subject to a lien for the payment of unpaid dues and such other charges as may be lawfully incurred thereon under the provisions of this act, and the by-laws may prescribe the manner of enforcing such lien. New shares may be issued in lieu of shares matured, withdrawn, retired or forfeited; but at no time shall the shares issued and in force exceed the aggregate number of shares into which the authorized capital stock is divided as designated in the articles of association: *Provided further*, That any building and loan association heretofore or hereafter incorporated under the laws of this State may, by a resolution adopted by a two-thirds vote of shares represented and voting at any annual meeting, or at any meeting called for that purpose, increase its authorized capital stock and shares, or amend its articles of association, or by-laws, in any manner not inconsistent with the provisions of this act; but no such increase of authorized capital stock nor amendments shall have effect until a copy of such resolution, certified by the president and secretary of the association, shall be filed and recorded in the same manner as is provided in section two of this act for the filing and recording of original articles of association and the filing of by-laws.

SEC. 6. Any shareholder desiring to withdraw his unpledged shares from any association shall have the privilege to do so by giving thirty days' written notice of such intention, and shall then be entitled to receive the full amount of dues paid in by him or her upon the shares to be withdrawn, and such interest thereon, or such proportion of the profits apportioned thereto, as the by-laws may prescribe, less all fines unpaid, and a pro rata share of losses sustained during the term of his or her membership, and upon shares less than one year old there may be deducted the actual expense incurred in writing such shares, not to exceed fifty cents per share: *Provided*, That the rate of interest or profits paid on withdrawals shall not exceed the rate of net earnings of the association: *Provided further*, That not more than one-half of the funds received by the association in any one month shall be applicable to the payment of withdrawing shareholders unless otherwise ordered by the board of directors; and when the demands of withdrawing shareholders exceed the funds applicable to their payment they shall be paid in the order in which their notices of withdrawal were filed with the association. Within sixty days after the death of a shareholder his or her legal representative shall be entitled to receive the withdrawal value of the unpledged shares of such decedent. No fines shall be charged to a shareholder's account after his or her decease unless his or her legal representative assumes the future payments of dues on such shares: *Provided further*, That not more than two-thirds of the funds received by any association in any one month, which shall include the funds applicable to the payment of withdrawals, shall be applicable to the payment of matured shares without the consent of the board of directors.

SEC. 7. Married women may become subscribers to the capital stock of such corporation, and hold, control and transfer their stock in all respects as femmes soles, and their stock shall not be subject to the control of or liable for the debts of their husbands. Minors may become subscribers to and owners of the stock of such corporations by guardian or trustee, and such guardian or trustee may withdraw the stock of such minor, as provided in section six of this act: *Provided, however*, That such guardian or trustee shall give bonds to the probate court in double the amount of the withdrawal value of such stock, for the use of such minor on his or her becoming of age; but it is hereby provided that the owner or legal representative of the stock of such association shall be entitled to vote at any election, when the stockholders are called upon to vote, in the manner provided in the by-laws of such association: *And provided further*, That no stockholder shall cast more than forty votes.

SEC. 8. At such times as the by-laws shall designate, not less frequently than once a month, the board of directors shall hold meetings, at which the funds in the treasury applicable for loans shall be loaned to the member who, in open competition, shall bid the highest premium for priority of right to a loan; or in lieu thereof, such funds may be loaned either with or without premium as the borrower may, in writing, agree to pay, in which case the priority of right to a loan shall be decided by the priority of the applications therefor. The manner in which said premium may be paid shall be prescribed in the by-laws. No loans shall be made by such association to anyone not a member thereof (except as hereinafter provided), nor to any member for an amount greater than the par value of the shares held by such member.

Borrowers shall be required to give real estate security, unincumbered except by the prior liens held by such association, accompanied by a transfer and pledge to the association of the shares borrowed upon as collateral security for the repayment of the loan: *Provided*, That no loan made upon real estate security shall exceed in amount two-thirds of the appraised valuation of such real estate: *Provided further*, That the shares of such association may be received as security for the loan of an amount not to exceed ninety per cent of the withdrawal value of such shares: *Provided further*, That, subject to the approval of the secretary of state, the number of payments of dues, interest and premium required from the borrowing stockholder to pay off his loan and secure a release of his incumbrance may be limited to such a definite number as the by-laws may provide.

SEC. 9. If the borrower neglects to offer security satisfactory to the board of directors within the time prescribed by the by-laws, his or her right to the loan shall be forfeited, and he or she shall be charged with interest or premium, if any, for one month, together with any expense incurred, and the money appropriated for such loan may be released at the next or any subsequent meeting.

Whenever a borrowing shareholder shall be in arrears in the payment of dues, interest or premium for more than four months, the board of directors may, at their discretion, declare the pledged shares forfeited, and the whole amount of the loan due and payable, and its collection, together with the arrears of interest, premium and fines, may be enforced by proceedings upon the security held by the association, in accordance with law: *Provided*, That the withdrawal value of the pledged shares, at the time of commencement of foreclosure proceedings, shall be credited upon the loan.

SEC. 10. Any borrowing shareholder desiring to repay his loan shall have the privilege of doing so at any time, by giving the association thirty days' written notice of such intention. The borrower shall be charged with the amount of the original loan, together with all arrearages of interest, premium and fines, and shall be given credit for the withdrawal value of his shares pledged as security; and the balance shall be received by the association in full satisfaction of said loan: *Provided*, That in cases where the premium is deducted from the loan in a gross sum, and the borrower repays the loan before the expiration of the tenth year from the date upon which said loan was made, such borrower shall be given credit for one-tenth of the premium paid for every year of the said ten years then unexpired: *Provided further*, That any borrower desiring to retain his or her shares and membership may repay his loan without claiming credit for the withdrawal value of said shares, whereupon said shares shall be retransferred to him or her, and shall be free from any claim by reason of said loan.

SEC. 11. Corporations organized under this act being of the nature of cooperative associations, therefore no premium, fines, nor interest on such premiums that may accrue to the said corporation, according to the provisions of this act, shall be deemed usurious, and the same may be collected as other debts of like amount may be collected by law in this State.

SEC. 12. No corporation or association created under this act shall cease or expire from neglect on the part of the corporation to elect officers at the time mentioned in their by-laws, and all officers elected by such corporations shall hold their offices until their successors are duly elected and qualified.

SEC. 13. Any loan or building association incorporated by or under this act is hereby authorized and empowered to purchase at any sheriff's or other judicial sale, or at any other sale, public or private, any real estate upon which such association may have or hold any mortgage, lien or other incumbrance, or in which said association may have an interest, and the real estate so purchased to sell, convey, lease or mortgage at pleasure to any person or persons whomsoever.

SEC. 14. Any loan or building association incorporated under this act, or any prior act, may extend the duration of time for which such association was organized by a vote of two-thirds of the capital stock of such association at any annual meeting of the stockholders of such association; thereupon the board of directors shall transmit a copy of the proceedings of such annual meeting, duly attested, to the secretary of state, who shall make a duly authenticated copy thereof, as provided in said section three of this act, certifying to the extensions of time of such corporation, and the same shall be recorded as provided in said section three of this act, and any building and loan association incorporated under any prior act, and extending the duration of the time for which it was incorporated, in the manner herein provided, shall be deemed as incorporated under and be vested with all of the power given in this act, the same as though such corporation had been originally incorporated under it.

SEC. 15. Each association formed under the provisions of this act shall, at the close of its first year's operations, and annually at the same period in each year there-

after, publish in at least two newspapers published in the same place where their business may be located, or if no newspaper be published in such place, then in any two newspapers published nearest such place, a concise statement, verified by the oaths of its president and secretary, showing the actual financial condition of the association, and the amount of its property and liabilities, specifying the same particularly.

SEC. 16. The shares held by any member, being a householder, of any association incorporated under the provisions of this act shall be exempted from levy and sale on execution or attachment to the amount of one thousand dollars in such shares, at the par value thereof: *Provided*, That such exemption shall not apply to any person who shall have a homestead exempted under the general laws of this State.

SEC. 17. The shares held by any member of any such association incorporated under the provisions of this act, and all mortgages or other securities held by such associations, shall be exempted from all municipal or other tax under the laws of this State.

SEC. 18. The secretary of state shall have supervision of all building and loan associations doing business in this State, and shall be charged with the execution of the laws of this State relating to such associations: *Provided*, That during the absence or disability of the secretary of state and deputy secretary of state, the chief of the building and loan division in the department of state shall be authorized to perform all the duties relating to the control and supervision of such associations and the execution of the laws above described. Said chief of the building and loan division shall receive a salary of fifteen hundred dollars per year. He shall also receive necessary traveling expenses connected with the duties of his office, which, when audited by the board of State auditors, shall be paid by the State treasurer on the warrant of the auditor general.

SEC. 19. Every building and loan association doing business within this State shall, on the first day of July of each year, or within sixty days thereafter, file with the secretary of state a full and detailed statement of its financial condition on the thirtieth day of the preceding June, and the business transacted during the preceding year. Said statement shall set forth the amount and character of its assets, liabilities, receipts and disbursements, and shall contain such other information, and be in such form as the secretary of state may prescribe, and shall be subscribed and sworn to by the secretary and treasurer of such association. Any such association refusing or neglecting to file the annual statement herein required within the period hereinbefore prescribed shall forfeit five dollars per day for each and every day such statement shall be withheld; and the secretary of state may maintain an action in the name of the State to recover such penalty, which upon its collection shall be paid into the State treasury.

SEC. 20. Once in each year, or oftener, if in the opinion of the secretary of state, it shall be necessary, the secretary of state shall make, or cause to be made, an examination into the affairs of all building and loan associations doing business in this State. Such examinations shall be full and complete, and in making the same the examiner shall have full access to, and may compel the production of all books, papers, and moneys, etc., of the association under examination, and may administer oaths to and examine the officers of such association, or any other person connected therewith, as to its business and affairs.

The secretary of state may appoint such special examiners as may be necessary to carry out the provisions of this act. Such examiners shall each be paid at the rate of five dollars per day; they shall also receive necessary traveling expenses connected with the duties of their office, which, when audited by the board of State auditors, shall be paid by the State treasurer on the warrant of the auditor general.

SEC. 21. Whenever it shall appear to the secretary of state that the affairs of any such association are in an unsound condition or that it is conducting its business in an unsafe or unlawful manner, the secretary of state shall at once notify the board of directors of such association, giving them twenty days in which to restore its affairs to a safe and sound condition or to discontinue its illegal practices. If after twenty days such restoration shall not have been made, or such illegal practices shall not have been discontinued, the secretary of state shall order one of the examiners, appointed to examine such associations, to take possession of all books, records and assets of every description of such association, and hold and retain possession of same pending the further proceedings hereinafter specified. Should the board of directors, secretary, or person in charge of such association, refuse to permit the said examiner to take possession as aforesaid, the secretary of state shall communicate such fact to the attorney-general, whereupon it shall become the duty of the attorney-general at once to institute such proceedings as may be necessary to place such examiner in immediate possession of the property of such association. Upon taking possession

of the effects of the association as aforesaid, said examiner shall prepare a full and true statement of the affairs and conditions of such association, including an itemized statement of its assets and liabilities, and shall receive and collect all debts, dues and claims belonging to it, and may pay the immediate and reasonable expense of his trust. Said examiner shall be required to execute to the secretary of state a good and sufficient special bond conditioned upon the faithful discharge of his duties as custodian of such association, which said bond shall be approved by the secretary of state.

The secretary of state shall, within fifteen days next after said examiner has acquired possession of the property of such association, convene a special meeting of the shareholders for the purpose of considering and acting upon the examiner's report of the affairs and condition of such association as found by him from his examination thereof. The shareholders may, at said special meeting, by the votes of those owning two-thirds of the shares in force, resolve to go into liquidation, and for that purpose may, by a majority vote of those present, elect from among their number a conservator and fix his compensation. A copy of said resolution, duly certified by the presiding officer and secretary of said special meeting, together with the name and address of the conservator thus elected, shall be filed with the secretary of state. Said conservator shall be charged with a proper distribution of the assets, discharge of all liabilities and final closing up of the business of such association, and before he shall enter upon the duties of his office he shall be required to execute to the association a good and sufficient bond, conditioned upon the faithful discharge of his duties, which bond shall be approved by and filed with the secretary of state. Upon the election and qualification of said conservator as aforesaid, the said examiner shall, when so ordered by the secretary of state, turn over and deliver to said conservator all the books, papers, money and effects of every description in his hands belonging to such association. Said conservator shall, upon the completion of the duties intrusted to him, prepare a statement to that effect, reciting therein that all the liabilities of such association have been completely discharged, and its assets and property distributed among all the persons entitled thereto. Said statement shall be subscribed and sworn to by said conservator and filed with the secretary of state, and a notice of such a dissolution shall be published for three successive weeks in any newspaper published in the county wherein the principal office of such association is located. Upon the filing of said statement and making publication as aforesaid, such association shall be deemed dissolved.

Sec. 22. If, after having called a meeting of the shareholders as herein provided, the secretary of state shall find that liquidation by the shareholders can not be had, or consummated, he shall communicate such fact, together with a statement of the condition of the association, to the attorney-general, who shall thereupon institute the necessary proceedings to enjoin such association from doing any further business, and for the appointment of a receiver therefor.

Sec. 23. If a shareholder be in arrears in the payment of dues upon unpledged shares, the board of directors may, if the shareholder fails to pay the amount in arrears within thirty days after notice, declare said shares forfeited. The withdrawal value of said shares at the time of forfeiture shall be ascertained and paid to such shareholder upon such notice as shall be required of a withdrawing shareholder: *Provided*, That fines for the nonpayment of dues, interest or premium shall not exceed one per cent per month on each dollar in arrears.

Sec. 24. The gross earnings of every building and loan association shall be ascertained at least once in each year, from which shall be deducted a sufficient amount to meet the operating expenses of such association, and from said earnings only shall such expenses be paid. From the balance of the earnings there shall be set aside at least one per cent annually as a reserve fund, until such fund reaches five per cent of the outstanding loans, at which rate it shall thereafter be maintained and held by annual appropriations from the earnings. From said reserve fund shall be paid all losses sustained by such association from depreciation of securities or otherwise. After providing for the expenses of the association, and the reserve fund as aforesaid, the residue of such earnings shall be transferred and apportioned to the credit of shareholders as the association by its by-laws shall provide.

Sec. 25. At the annual meeting, or at any meeting called for that purpose, any two or more building and loan associations organized under the laws of this State may, by a majority vote of all the shareholders of each of the different associations, resolve to consolidate into one, upon such terms as shall be mutually agreed upon by the directors of such associations. Any shareholder not consenting to such consolidation shall be entitled to receive the withdrawal value of his stock in settlement, or, if a borrower, to have such value applied in part settlement of his loan: *Provided*, That such consolidation shall not take effect until a copy of said resolution, certified by a majority of the board of directors of each association, shall be filed with the secretary of state.

Sec. 26. At the annual meeting, or at any meeting called for that purpose, any building and loan association of this State may, by the votes of shareholders owning two-thirds of the shares in force, resolve to liquidate and dissolve the corporation. In order to facilitate such dissolution, the board of directors may, if they deem it advisable, sell and transfer the mortgage securities and other property of such association to another corporation, person or persons, subject, however, to the vested and accrued rights of the mortgagors: *Provided*, That before said resolution shall have effect, a copy thereof, certified by the president and secretary of such association, together with an itemized statement of its assets and liabilities, sworn to by a majority of the board of directors, shall be filed with the secretary of state. After filing a copy of the resolution as aforesaid, it shall be unlawful for such association to issue stock or make any loans, but all of its income and receipts, in excess of the actual expenses of management, shall be applied to the discharge of its liabilities.

Sec. 27. Every officer, director, member of any committee, clerk or agent of any building and loan association doing business in this State, who embezzles, abstracts or misapplies any of the moneys, funds or credits of such corporation, who issues or puts into circulation any warrant or other order, who assigns, transfers, cancels or delivers up any note, bond, draft, mortgage, judgment, decree, or any other written instrument belonging to such association; who certifies to or makes any false entry in any book, report or statement of or to such association, with intent in either case to deceive, injure or defraud such association, or any member thereof, or to deceive anyone appointed to examine the affairs of such association, shall be deemed guilty of a felony, and on conviction thereof shall be imprisoned in the State prison, or in the State house of correction and branch of State prison, or in the State house of correction and reformatory, for a period of not less than one year nor more than ten years. Any officer, whose duty it is, failing to make the reports required by this act, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be fined not less than twenty-five dollars nor more than two hundred dollars, or shall be imprisoned not less than one month nor more than six months.

Sec. 28. The secretary of state shall annually, at the earliest possible date after the statements required of such associations are received, make a report to the governor of the general conduct and condition of all building and loan associations doing business in this State, including the information contained in such statements, arranged in tabular form, together with such suggestions as he may deem expedient. There shall be printed of said report as many copies as the secretary of state shall deem necessary.

Sec. 29. Every building and loan association organized under the laws of this State shall be subject to and shall pay to the secretary of state the following fees, which fees shall be paid into the State treasury, to wit: For filing articles of association, by-laws, amendments, or any other paper, one dollar; for making and certifying to articles of association, by-laws, or any other papers required to be filed with the secretary of state, twenty cents per folio of one hundred words; for making the annual examination herein provided, one seventy-fifth part of one per cent of the gross amount of assets of such association, which fee shall be paid at the time of filing its annual statement: *Provided*, That the examination fee of any association shall not be less than twenty dollars nor more than one hundred dollars in any one year: *Provided further*, That the expenses incurred and services, other than examinations, performed especially for such association shall be paid in full by such association.

NEW JERSEY.

AN ACT concerning building and loan associations. As to building and loan associations of other States.

(Act of 1903.)

28. A building and loan association of another State may be admitted to transact business in this State in the manner hereinafter provided and no such association not so admitted shall transact business in this State.

29. Application for authority to transact business in this State shall be made to the commissioner of banking and insurance, and on making such application every such association shall file in the department of banking and insurance a duly authenticated copy of its charter or certificate of incorporation, its constitution and by-laws, and thereafter certified copies of all amendments thereto; the names and addresses of its officers and directors, the compensation paid each officer, and a report of its condition, in such form as may be prescribed by the commissioner of banking and insurance, which shall be verified by the oath of such officers and other persons as

said commissioner shall designate, and said commissioner shall furnish blank forms for the report required, and may call for additional reports at such other times as may seem to him expedient.

30. If it shall appear to the commissioner of banking and insurance by the report aforesaid, and by an examination of said association, that it has good assets of sufficient value to cover all its liabilities, and that its methods of doing business are safe and not contrary to the laws governing building and loan associations of this State, it may be admitted to transact business in this State upon a certificate of authority to be issued by the commissioner of banking and insurance, which shall only be issued when said association shall have complied with the further requirements of this act.

31. The commissioner of banking and insurance, before issuing the certificate of authority as aforesaid, shall require every such association to deposit with him such securities as he may approve, amounting to at least thirty thousand dollars, which securities shall be held by him in trust for the exclusive benefit and security of the creditors and shareholders of such association resident in this State, and he shall have authority to require it to deposit additional securities, and to order a change in any of the securities so deposited at any time, and no change or transfer of the same shall be made or be effectual without his assent; such deposit shall be maintained intact in the full sum required at all times, but the association making such deposit, so long as it shall continue solvent and comply with all the provisions of this act applicable to it, may receive the dividends or interest on the securities deposited, and may, from time to time, with the assent of said commissioner, withdraw any of such securities on depositing with said commissioner other like securities the par value of which shall be equal to such as may be withdrawn.

32. Every such association shall pay for filing a certified copy of its charter or certificate of incorporation, twenty dollars; for filing original and annual reports, twenty dollars; for certificate of authority, annually, two hundred and fifty dollars; for certificate for each agency, five dollars, and shall defray all expenses incurred in making any examination of its affairs as herein provided for; and the commissioner of banking and insurance may maintain an action, in the name of the State, against such association, for the recovery of such expenses, in any court of competent jurisdiction.

33. Such certificate of authority shall be for the current year only and shall not be issued until such association shall by a duly executed instrument, filed in the department of banking and insurance, constitute the commissioner of banking and insurance and his successor in office its true and lawful attorney, upon whom all original process in any action or legal proceeding against it may be served, and therein shall agree that any original process against it which may be served upon said commissioner shall be of the same force and validity as if served on the association, and that the authority thereof shall continue in force irrevocable so long as any liability of the association remains outstanding in this State; the service of such process shall be made by leaving a copy of the same in the office of the commissioner of banking and insurance with a service fee of two dollars to be taxed in the plaintiff's costs; when any original process is served upon the commissioner he shall forthwith notify the association of such service by letter directed to its secretary, and shall, within two days after such service, forward to the secretary, in the same manner, a copy of the process served on him, and such service shall be deemed sufficient service upon the association; said commissioner shall keep a record of all such process showing the day and hour of service.

34. If any such association itself, or by its agents, attorneys, solicitors, surveyors, canvassers, collectors or other representatives of whatever designation, or if any agent, attorney, solicitor, surveyor, canvasser, collector or other representative, or any individual or firm, whether on behalf of such association or not, shall solicit, negotiate or in anywise transact any business in this State, except in the enforcement of contracts by legal process, without having complied with the requirements of this act, such association and such persons shall respectively be liable in a penalty of two hundred and fifty dollars and all costs of suit, to be sued for and collected in the name and for the benefit of the State, by the commissioner of banking and insurance; the first process against any person may be by *capias ad respondendum*, and any person against whom judgment may be obtained shall be committed to any county jail until such penalty and costs are paid, and the necessary expenses incurred by the said commissioner in carrying out the provisions of this act, when not otherwise provided for, shall be paid out of the fees collected as herein provided for.

35. Every such association doing business in this State shall annually in the month January file in the department of banking and insurance a report of its condition **he** close of business on the thirty-first day of December last preceding, and of **transactions** for the year ending on that day, in such form and verified by such

officers and other persons as the commissioner of banking and insurance shall designate, and the said commissioner shall furnish blank forms for the report required, and may call for additional reports at such other times as may seem to him expedient; if any such association shall fail to file such annual report prior to the first day of February, or to furnish such additional reports as may be called for by the commissioner of banking and insurance within such reasonable time as shall be fixed by said commissioner, it shall be liable in a penalty of two hundred and fifty dollars and costs of action, to be sued for and collected by said commissioner in the name and for the benefit of the State.

36. The funds received by any such association from shareholders in this State shall be invested in the same manner and no other as provided in this act for associations of this State.

37. The commissioner of banking and insurance is hereby authorized to refuse to renew the annual certificate of authority to do business in this State to any such association, if in his judgment the affairs of such association are in an unsound condition, or its investments are illegal or unsafe, or its liabilities exceed its assets, or is not complying with all the provisions of this act.

Following is a digest, under principal heads, of the legislation of the various States. Where no specific provision is made the subject is controlled by the articles of incorporation or the constitution and by-laws of the associations, or by the general corporation laws of the State.

DIGEST OF LAWS RELATING TO BUILDING AND LOAN ASSOCIATIONS.

INCORPORATION AND PRELIMINARY REQUIREMENTS.

1. Any number of persons, the minimum ranging from three (Ala., Colo., Del., etc.) to twenty-five (Kans., Mass., Mo., etc.), may sign articles of incorporation, setting forth the name, purposes, period of existence, principal offices, etc., of the association.

Citizenship or declared intention thereof, and residence in the State of a part or all the incorporators are required in many States.

2. The name is required to be distinctive and in some States must include designated words, as "Building association," "Building and loan association," "Savings and loan association," etc.

3. The period of incorporation shall not exceed 20 years (Ala., Colo., N. Dak.); 30 years (Mich.); 40 years (Md., N. Mex.); 50 years (Kans., Mo., Okla., Utah); 50 years unless another term is stated in the articles (Cal.). Unless the term is limited, the charter shall be perpetual (Del., D. C.)

4. The amount of capital of an association is, in general, stated in the articles of incorporation or determined by its by-laws. In some States a statutory limit is fixed.

The capital of any association shall not exceed \$500,000 (Okla.); \$1,000,000 (Conn., Fla., Me., N. H., Pa., Vt.); \$2,000,000 (Ala., Cal.); \$5,000,000 (Ky., Wis.); \$10,000,000 (Kans., Mo.). The capital of an association shall not be less than \$50,000 (La.); \$1,000,000 (Oreg.); \$2,000,000 (Minn., Wash.).

An initial and an ultimate capital may be named, the former as a basis of incorporation and organization (S. C.).

7 The authorized capital stock may be increased within the limits fixed by law by a vote of the members holding a majority of the stock (Ala.); two-thirds of the stock (Mich.); three-fourths (Oreg.); may be increased by the board of directors to any sum thought desirable (Ind.); by a three-fourths vote of the board if three-fourths of the capital stock previously authorized has been issued, but such increase shall not exceed the amount previously issued (Minn., Wash.).

5. Preliminary to incorporation, subscriptions to stock must be made to the amount of 50 shares (Mich.); 100 shares (Ill., Ind., Iowa); 30 shares, on which one month's dues have been paid (Kans., Mo.); 200 shares, on which an entrance fee of not less than 25 cents per share has been paid (N. Mex.); stock to the amount of \$7,500 must be subscribed for (La.); \$10,000 (N. J., Oreg.); 5 per cent of the authorized capital (Mont., Ohio, Utah, Wyo.); 50 per cent of the initial capital, on which 50 per cent of the first installment has been paid (S. C.).

6. By-laws must be adopted within one month of filing the articles of incorporation (Cal.); 60 days (Oreg.). By-laws and amendments thereto must be filed in a designated county office of the county in which the principal place of business is situated (Colo., N. Mex.); in a State office or offices (Ill., Iowa, Kans., Mass., Mich., Minn., Mo., Nebr., N. Y., R. I., Wis.). All by-laws shall be subject to the approval of a State official before going into effect (Wash.).

7. After compliance with the legal requirements, a certificate or license authorizing associations to do business is granted by the officer of the county charged with such duty (Colo.); by a State officer (Cal., Del., Ga., Iowa, Minn., Nebr., N. Mex., N. C., N. Dak., Oreg., S. Dak., Vt., Va.); by a State officer before doing business outside of the county of domicile (Tenn.).

Such license or certificate is valid for 6 months (Colo.); one year (Cal., Del., Ga., Iowa, Minn., N. Mex., N. C., N. Dak., Oreg., S. Dak.); after the expiration of which period it must be renewed.

8. Specific provisions as to fees, designated as fees for incorporation, charter fees, fees for filing the articles of incorporation, license fees, etc., are as follows:

The incorporation fee of an association having a capital of \$50,000 or less is \$25, and ranges upward to \$250 when the capital exceeds \$1,000,000 (Ala.). The charter fee is \$25 (S. C.); \$100 (Fla.). The fee for filing articles is \$25 (N. C.); \$5 for each \$50,000 capital, or fractional part thereof (Ind.); 20 cents per 100 words (Mich.); for filing amendments, \$5 (Wis.)

The fee for certificate or license is \$5 (Me., Mass., S. Dak.); \$10 (Wis.).

A license fee or privilege tax of \$25 is payable annually (Iowa); \$25 if monthly dues received do not exceed \$500, ranging to \$200 where such receipts amount to \$3,000 or more per month (Miss.); \$1

for each \$1,000 assets (N. Mex.); \$10 for a capital of \$50,000 or less, and an additional \$5 for each added \$50,000 or fractional part thereof, but no annual fee shall exceed \$50 (Vt.); \$20 where capital is not more than \$10,000, ranging to \$843.50 for a capital of \$500,000, and \$92.50 additional for each added \$100,000 or fractional part thereof (Tenn.); \$5 for corporations doing business within the State exclusively, and \$25 for those operating also outside the State (Del.); \$50 for a paid-up capital of \$25,000 or less, ranging to \$250 for a paid-up capital of \$400,000, and \$50 additional for each \$100,000 in excess thereof, but purely mutual associations doing business in the city or county of domicile only are required to pay the sum of \$50 and no more (Va.). An annual payment of \$50 to the depository holding securities for an association shall be accepted as its license fee (Ga.).

Each agent must have a certificate renewable annually, the fee for which is 50 cents (N. C.); \$10 for each county in which an agent operates (Fla.).

9. In some States it is required that mortgages taken in the course of business, and other securities, be deposited with a State official or other designated depository. The depositing association collects the interest on such mortgages, bonds, etc., and may exchange the same or withdraw them for settlement or foreclosure, etc., so long as the association remains solvent and faithfully discharges its obligations.

The following provisions appear with reference to deposits:

All mortgages and other securities received in the regular course of business shall be deposited; if the same do not amount to \$25,000, additional approved securities must be deposited to make up that amount (Mont., Oreg., Wash.); 75 per cent of all mortgages, etc., must be deposited, the total to be not less than \$25,000, or if deposits must be made in other States, those within this State shall equal 75 per cent of the loans outstanding therein, and shall not be less than \$25,000 (Ga.); associations having \$500,000 permanent stock subscribed and not less than \$200,000 paid in shall keep on deposit securities of a value of \$200,000 (Minn.).

The above requirements do not extend to associations doing business in the county of domicile only (Mont., Oreg.); in the county of domicile and the counties adjacent thereto (Minn., Wash.); in the county of domicile and not more than two adjacent counties (Ga.).

If domestic corporations doing business in other States are required by law to deposit within such States the securities taken therein, a certificate of such fact will be accepted (Wash.).

10. No association shall do business outside of its home and the immediately adjoining counties unless it has a capital of at least \$100,000 (Kans.); assets equal to liabilities, of at least \$100,000, based on dues paid in (Mo.); must have accumulated securities of a value of \$25,000 before doing business outside the county of domicile (Tenn.).

The establishment of branch offices and the employment of agents to solicit members or sell shares for a compensation are forbidden (N. J.).

Each incorporation shall be created by special act (R. I.).

Failure to incorporate involves a penalty of \$1,000 (Mass.).

In the laws of Iowa, provision is found for the control of unincorporated associations, similar in general to the requirements as to incorporated associations, except that a deposit of \$50,000 in first mortgages or negotiable notes is required.

MANAGEMENT.

Matters of management, including mode of choosing directors and officers, the number, qualifications, and duties of the same, and the qualifications for voting are in many States regulated by the general corporation law or are fixed by the articles of incorporation or by the constitution and by-laws of the associations.

The following specific provisions appear:

1. Officers of the association who handle funds or who sign or indorse checks or drafts shall give bonds (Ala., Colo., Conn., Ga., Ill., Iowa, Kans., La., Me., Mich., Minn., Mo., Mont., N. J., N. Mex., Ohio, Okla., R. I., Tenn., Utah, Wash.). The secretary and treasurer may be one person (Me., Mass.).

• No officer or agent or other person shall receive compensation by salary, fees, expenses, or otherwise for soliciting the sale of shares (N. Y.).

2. Members have one vote each (Conn., Me., Mass., N. H., N. J., R. I.); one vote for each share held (Cal., Del., Ill., Mich., Minn., N. Dak., Ohio, Oreg., S. Dak., Utah, Vt., Wis.); one vote for each \$100 of stock held (Iowa); but no member may cast more than 40 votes (Mich.); not more than 20 in his own right (Ohio).

MEMBERSHIP.

In general, membership is open to persons capable of making contracts who take one or more shares of stock and subscribe to the constitution and by-laws of the association.

Specific provisions as to married women and minors are made by a number of States, as follows:

1. Minors may hold shares by their parents, guardians, or trustees (Cal., Iowa, Me., Mich., N. Mex., N. Y., Pa., Vt.); minors hold in their own names, but subject to the control of parents or guardians (Conn.); minors hold in their own names with the same rights and liabilities as other members (Idaho, Ill., Ind., Ky., La., Mass., Mont., Nebr., N. J., N. C., Ohio, Okla., Wis., Wyo.). Minors must be above 14 years of age to hold in their own right (Ky., Nebr., Okla., Wis.); must be above 16 to vote (N. J.).

2. Married women holding stock have all the rights and liabilities of other members (Fla., Idaho, Ill., Ky., La., Mich., N. J., N. Mex., N. C., Okla., Pa., Tenn.); must be of full age (Fla.).

SHARES.

The value of shares is, in general, fixed by the by-laws, but a number of States determine the value or the limits of value by statute. The number of shares that may be held, entrance and membership fees, exemption from execution, provisions as to transfer, withdrawal, maturity, etc., are also subjects of legislation in various States.

1. Shares shall have a maturing value of \$100 (Ill., Minn.); \$200 (Conn., Me., Mass., N. H., Vt.); \$100 or \$200 as may be fixed by the articles of incorporation and by-laws (Cal., Okla.); not less than \$100 (Oreg.); \$200 (N. Mex.); shall not exceed \$200 (Idaho, Tenn., Wyo.); \$500 (Fla., Ind., Pa.); \$1,000 (Kans., Mo.); shall be not less than \$25 nor more than \$200 in value (Mich., Wis.); not less than \$25 nor more than \$500 (La.); not less than \$50 nor more than \$250 (N. Y.).

In determining the amount of the capital stock of an association each share shall be valued at \$50 (Ala.).

All shares shall be of the same par or maturity value (N. J.).

No series of any issue shall exceed \$100,000 (Ind.); \$500,000 (Fla., Pa., Wis.); nor one-tenth of the capital stock (Wis.).

Not more than 10,000 shares shall be outstanding at any time (Vt.).

2. No person shall hold more than 25 shares in any association (Me., Mass., N. H., Vt.); 100 shares (Wis.); 100 shares of a par value of \$200 (Tenn.); \$5,000 of stock (Nebr.); \$10,000 (Iowa).

If the capital is \$100,000 or less, no member shall hold more than 2½ per cent of the whole number of shares; if above \$100,000 and not more than \$500,000, 2 per cent; \$500,000 to \$1,000,000, 1½ per cent, and if the capital exceeds \$1,000,000, 1 per cent (Ky.).

Each association shall determine by its by-laws the number of shares that may be held by one person (N. Y.).

3. An entrance fee may be charged (D. C., Md., Oreg.). The entrance fee may not exceed 10 cents on each share of stock (Cal.); 25 cents (Ill., N. Y., Vt.). A membership fee of 50 cents per \$100 of stock may be charged (Ind.). In lieu of share fees a membership fee not exceeding \$1 may be charged (N. Y.).

4. Two shares of each member are exempt from attachment or execution (Me.); shares to a value of \$500 (Vt.); \$600 (N. Y.); \$1,000 (Cal.); \$1,000 to householders not having an exempted homestead (Mich.).

Shares are subject to execution (Mo.).

5. In order to be binding on an association, transfers must be recorded on its books (Ala., Ill., Mich., N. Mex., N. Y., S. Dak., Vt.).

Borrowing members can not transfer shares until their debt is paid, unless the board of directors gives its consent (Colo.).

The transfer of a certificate of stock shall constitute the transferee a member of the association (Okla.).

A transfer fee may be charged not exceeding 10 cents on each share of stock (Cal.); 25 cents (Ill., N. Y., Vt.); or in lieu thereof a fee for the transaction not exceeding \$1 (N. Y.).

6. Members desiring to withdraw their shares may do so on giving required notice (Minn., N. J., N. Mex.); 30 days' notice (Cal., Kans., Ky., Me., Mass., Mich., Mo., Mont., Nebr., N. H., N. Y., N. Dak., Okla., Pa., R. I., S. Dak., Tenn., Utah, Vt., Wis., Wyo.); 60 days (Fla., Oreg., Wash.); 3 months (Ind.); not to exceed 30 days (N. J.); but notice may be waived by the directors (N. Y.).

Stock must have been in existence 3 months (Nebr.); 1 year (N. Mex., Oreg., R. I., Wash.); 2 years (Minn.); 3 years (Wyo.); but the board of directors may buy in the shares of a member wishing to withdraw at an earlier date at a discount not exceeding 8 per cent on the amount of dues paid in (Minn.).

Withdrawing members receive the amount paid in and accumulated profits (Tenn.); less fines and a proportionate part of losses and other charges (D. C., Ill., Ind., Ky., La., Me., Mass., Mich., Mont., N. H., Ohio); but a portion of previously credited profits may be deducted (Me., N. H.); receive the amount paid in, together with a reasonable share of the profits (N. J.); such part of the earnings as may be provided by the by-laws or fixed by the board of directors (Cal., Fla., Pa., Va., W. Va.); less fines and other charges (Nebr., N. Dak., Okla., S. Dak., Utah, Wis., Wyo.); shall receive not less than the amount paid in, unless losses in excess of profits have been incurred during their term of membership, in which case they shall be charged with their proportionate share of loss only (Iowa); receive the amount of dues paid in, less 50 cents for each certificate of issue and for canceling the same, a rebate of 2 per cent to be held by the association as a reserve fund, and any unpaid fines; to this remainder shall be added three-fourths of the net profits credited to the stock withdrawn; if losses exceed profits and must be charged against capital actually paid in, only the sums due after adjustment of losses among all members shall be paid (Minn., Nebr.); shall receive the withdrawal value of shares as determined at the last distribution, plus the dues paid in since, less unpaid fines, authorized deductions for expenses and a proportionate share of unadjusted losses (N. Y.), plus interest as determined by the by-laws (Vt.).

Members withdrawing within 60 days shall receive dues paid in, less 10 per cent and any sum which may have been received from the association (Mont.); within 1 year from date of issue of stock they shall receive dues, less fines and charges (Fla., Ind., N. H., N. J., Pa.). Shares of

stock on which payments have been made for one year or more shall have a definite withdrawal value which shall be set out in the by-laws, which shall not be less than 8 per cent per annum on dues for the average time, less fines and penalties and a proportionate share of expenses and losses (Ala.). Members withdrawing shares not more than 2 years old receive all amounts paid in except membership fees and fines and the amounts deducted for expenses; if shares are more than 2 years old they receive in addition at least three-fourths of all profits credited thereto (Oreg., Wash.). Members withdrawing shares between 1 and 3 years old receive the amount paid in, not including membership premiums or fines, and less a withdrawal fee of not more than 1 per cent of the maturity value of the shares held and such amounts as may have been deducted for expenses and the guaranty fund; if between 3 and 4 years old, they receive the amount paid in less withdrawal fee, with 5 per cent interest; after 4 years, the interest shall be 6 per cent; and if 100 months or more have elapsed and the shares have not yet matured, they shall receive the amount paid in, less withdrawal fee, together with at least 75 per cent of the apportioned profits; these rates of interest to be payable only if the net profits of the association at the time justify the same (R. I.). The rate of interest or profits on any withdrawal shall not exceed the rate of net earnings of the association (Mich.).

In determining withdrawal values, salaries, commissions, and current expenses shall not be considered losses sustained (N. J.).

The stock of deceased members may be withdrawn as other stock (Fla., Me., N. H., N. Mex., Wash.); 60 days after the death of the stockholder (Mich.). Withdrawn shares of deceased members shall be credited with the full amount paid in and interest thereon, less charges (N. Dak., Okla., Pa., S. Dak., Utah, Wis., Wyo.); with full book value, less the withdrawal fee (R. I.); with the full amount paid in, and realized profits (Tenn.). No fines shall be levied against such stock after the death of the holder, unless the personal representative assumes further payments (Fla., Ill., Ind., Me., Mich., N. H., N. Mex., N. Dak., Okla., Pa., S. Dak., Utah, Wash., Wis., Wyo.); nor shall further profits be credited thereto (Ill., Ind.).

Not more than one-half the funds in the treasury at any one time can be applied to withdrawals without the consent of the board of directors (D. C., Fla., Ill., Ind., Ky., Me., Mass., Mich., Nebr., N. H., N. Dak., Okla., Pa., S. Dak., Tenn., Utah, Wis., Wyo.); not more than one-half the receipts for any one month can be so applied without the consent of the board of directors (Cal., Colo., Kans., La., Mo., N. J., N. Mex., N. Y., Oreg., R. I., Vt., Wash.); payments on matured shares must be included (Minn.). Not more than one-third the receipts can be applied to withdrawals if matured shares are outstand-

ing (Kans., Mont., N. Y., Vt.). Withdrawals may receive all funds as fast as collected except such as are necessary for the payment of expenses and outstanding contracts (Mont.).

Withdrawals shall be paid in the order of notice given (Cal., Ill., Kans., Mont., Nebr., N. H., N. J., N. Y., Pa., Vt., Wis.). shall be paid off pro rata among the shares of the same series (N. Dak.). In no case shall payment be postponed for a period longer than 6 months from the date of notice (N. J.).

Pledged shares shall not be withdrawn (Cal., Colo., Kans., N. Dak., Ohio, Pa., S. Dak., Utah, Wyo.) without the consent of the directors (N. Mex.). Shares pledged for stock loans may be withdrawn, the holder receiving the excess of the value over the amount borrowed (Ill., N. J.).

No profits or interest shall accrue after notice of withdrawal (Kans., La., Minn., Mo., R. I.) after the date fixed for withdrawal (N. H.).

Each shareholder's certificate shall contain a statement of what the withdrawal value of the shares held by him may be at any time (Mo., R. I.).

Withdrawing members are subject to all the duties and obligations of stockholders until the final payment by the association of the value of their stock (S. Dak.).

No fee, fine, or charge shall be assessed because of withdrawals after due notice (Mont.). A withdrawal fee of not more than \$1 per share nor \$5 per transaction may be charged (N. Mex.); \$2 per share and not more than \$10 per transaction (Colo.). A fee for writing shares, not exceeding 50 cents per share, may be exacted on withdrawals of shares less than 1 year old (Mich.).

7. The board of directors may retire free shares at their discretion (Conn., D. C., Ill., Iowa, La., Nebr.); after 3 years from the date of issue (Ky., Mo., N. Dak., Vt., Wyo.); 4 years (Cal., Me., Mass., N. H., N. Y.); whenever the shares are no longer required for the use of the association (N. Mex.). Thirty days' notice must be given to holders (Iowa). The constitution or by-laws of any association may provide for the retirement of unpledged stock (N. J., Pa., S. Dak., Wis.). If at the end of 5 years from the date of issue more than \$20,000 in free shares is outstanding, 25 per cent of the excess shall be retired annually, so that at the end of 9 years only the amount named shall be in existence (Cal.). If at the end of 5 years more than 100 free shares are outstanding, 25 per cent of such excess shall be retired annually except in associations maturing their shares in less than 6 years (Ky.). The board of savings bank commissioners may, in their discretion, order the retirement of free shares in any series which has run five years (Mass.).

Shares pledged for stock loans are treated as free or unpledged (Conn., Mass., Vt.).

Full paid and prepaid stock may be retired at any time at the option of the directors (Kans., Mo.); full paid stock, on 30 days' notice (Iowa). Not more than one-half the monthly receipts can be used in any one month for retiring stock (Cal.).

The shares to be retired shall be determined by lot (Cal., Conn., D. C., Ky., Me., Mass., N. H., N. Y., N. Dak., S. Dak., Vt., Wyo.), or in some other impartial manner (N. Dak.); from the oldest series, or the funds may be applied ratably among shares of the same series (D. C.). Shares shall be retired in the order of their issue (Ill., Iowa, Nebr.). Retirements shall be pro rata among shares of the same series (Pa.).

Holders of free shares retired before maturity shall receive the amount paid in and net earnings to date (Cal.); the amount paid in and not less than legal interest (Pa.); full value, less a proportionate part of unadjusted losses (Conn., Me., Mo., N. H., N. Y., S. Dak., Vt., Wyo.); value at last distribution period, plus dues paid since, and minus unpaid fines (Ill., Ky., Nebr.); book value (Ia.).

8. The shares of members defaulting in payment of dues and fines may be declared forfeited after 30 days' notice (Mich.); after 3 months' arrearages (Ind.); 6 months' arrearages (Minn., N. J., R. I., Wis.), and 20 days' notice (Wyo.); 6 months' arrearages and 30 days' notice (Ky., Me., Mass.); 2 months' notice (Cal., N. Y., S. Dak., Vt.); may be declared forfeited after 3 months' default, and are ipso facto canceled after 12 months (Kans., Mo.); stock is forfeited after such time as the by-laws may determine (D. C.).

No interest or profits are allowed after forfeiture (Cal., Kans., Ky., Me., Mo., S. Dak.); after the adjustment last preceding forfeiture (Mass., Wis.).

Members forfeiting their stock shall recover the amount paid in, less fines (D. C., R. I.); may receive value of stock, less fines and other amounts due (Ind., Kans., Me., Mass., Mich., N. J., Wyo.); withdrawal value, minus fines and other legal charges (Ky., Minn., Wash., Wis.).

Credits are withdrawable after 30 days' notice (Ky., Me., Mass.); are withdrawable within one year from date of forfeiture of shares, without interest (N. J., N. Y., S. Dak., Vt., Wyo.); within 2 years from the date of the last payment (Minn.); after 1 year and within 10 years, with interest at 3 per cent if earnings suffice (R. I.).

9. When maturity is reached, the payment of dues ceases, and the holder is entitled to the immediate payment of unpledged shares, or the cancellation of loans for which his stock has been pledged.

The following provisions appear in the statutes of the various States:

Matured free shares shall be paid off with interest from maturity until paid (Cal., Conn., Ill., Kans., Ky., Me., Mo., Nebr., N. Y., Okla., S. Dak., Vt., Wis., Wyo.).

Interest shall be not less than 6 per cent nor more than 8 per cent (Okla.). Shares maturing between adjustment periods shall receive interest for the full months since adjustment (Ky., Mass., Wis.).

At no time shall matured shares outstanding exceed 20 per cent of the assets (Ill.).

If the assets of an association are found to be insufficient to retire at the date fixed any stock issued to mature within a definite period, such stock may, by mutual agreement, be retired at the maturity period or earlier, if practicable, the holder to receive sums paid in and an equitable proportion of the profits (Minn.).

By-laws may provide that holders of free shares may receive at maturity not more than the face value of their shares, less the average premium paid by borrowers up to date (Mo.).

Not more than one-third the receipts shall be used for the payment of matured shares, except by consent of the board of directors (Cal., N. Y., Vt.); one-half the receipts, except by consent, etc. (S. Dak., Wyo.); one-half the funds in the treasury at any time, except by such consent (Conn., Kans., Ky., La., Me., Mass., Mo., Okla., Wis.); two-thirds, including the payment of withdrawn shares (Mich., Nebr.).

No funds shall be taken from any series to mature stock of any other series (Kans., Mo.).

The order of payment of matured shares shall be determined by the board of directors (S. Dak.); if not determined by the by-laws it shall be by lot (Wyo.).

10. Prepaid stock is stock on which a single payment is made and left until, with interest and apportioned profits, its value equals the fixed par or maturity value. Full paid stock is stock on which a single payment of the full amount or value of the matured stock is made and on which dividends are allowed, either of a guaranteed sum or of the apportioned interest and profits.

Such legislation as relates to these classes of stock is given herewith:

Full paid stock may be issued (Ky., Md., N. J., N. C., S. Dak.). Fully or partially paid stock may be issued (Colo., N. Mex.); and limited dividend stock (Ky., N. Mex.). Full paid and prepaid stock may be issued (Ind., Iowa, Kans., La., Minn., Mo., R. I., Tenn., Wyo.).

Full paid shares do not entitle their holder to vote (Iowa).

No stock shall be issued to receive fixed dividends, but all classes shall be subject to the same liabilities (Iowa, Kans.). No preferred or noncontributing stock shall be issued (Oreg., S. Dak., Wash.).

Full paid stock may receive a definite dividend, but such dividend shall not exceed that declared on other stock (Iowa, Kans., Minn., R. I.); shall not exceed the per cent of profits earned (Tenn., Wyo.).

Reserve fund stock, either installment or full paid, may be issued, to participate in the earnings to a fixed extent, chargeable with all depreciations and losses, except expenses, taxes, and fire insurance,

and not subject to withdrawal until the claims of all other shareholders and of all creditors have been liquidated (Oreg.).

Full paid guarantee stock may be issued, not to be withdrawn until all lawful claims of other classes of stock are liquidated, and to receive as dividends only the excess of such a rate as may be specified to be paid other classes of stock (R. I.).

A fixed dividend shall be declared on stock pledged for limited payment loans, if its earnings are sufficient, not exceeding the rate of premium interest bid for the loan, and not exceeding 6 per cent per annum. If, however, nonborrowing members receive a dividend greater than that apportioned to borrowing members, an additional dividend equal to one-half such excess shall be distributed to such borrowing members, and the other half of said excess shall be set aside as a contingent fund, and such borrowers' stock shall be exempt, as between the members of the association, from any further charges on account of loss (N. Y.).

No preferred or other than common stock shall be issued, and all shareholders shall occupy the same relative status as to debts and losses of the association; but this provision shall not forbid agreements with holders of full paid stock to receive a fixed annual profit in lieu of participating in the general profits of the association (N. J.).

DUES AND FINES.

1. Dues may be paid in single, stated, or monthly payments (Iowa); in monthly installments of \$1 on each share (N. H.); such installments may be monthly or semimonthly (Vt.). Installments shall not exceed 50 cents per week on each \$100 of stock (Ind.); \$1 per week on each share (Md.); \$1 per month (Ala., Conn., Me., Mass.); \$2 (Fla., Mich., Tenn.). No periodical installment shall exceed \$2 for each share (N. Mex., Okla., Pa., W. Va., Wis.); \$2.50 (La.). This does not forbid the receipt of installments of premium (Okla., Pa.). Stock shall be paid in regular equal payments at such times and in such amounts as the by-laws shall fix (Cal., Colo., D. C., Idaho, Ill., Kans., Ky.).

2. Default in payment of dues, installments on loans, interest, premiums, etc., may be punished by the levy of a fine which shall not exceed 1 per cent per month on such arrearages (Mich.); 2 per cent (Ala., Conn., Me., Mass., N. H., N. J., Pa., Vt.); 5 per cent for the first 2 months and 2 per cent per month thereafter (Colo., N. Mex.); not to exceed 10 per cent of the defaulted amount, which may be levied on every regular pay day during such default (Cal.); not to exceed 10 per cent, which may be assessed but once (S. C., Wyo.); 20 per cent (Ind.); not to exceed 5 cents per share per month (Iowa); 10 cents (Ill., Minn.); 10 cents per share for the first month and 15 cents per share for each month thereafter (Oreg., Wash.); 25 cents (Ky.); 3 cents per share of \$100 for the first month and 5 cents for each

succeeding month, to be collected only from profits belonging to the delinquent (Iowa).

No fine shall be charged on fines (Conn., Ill., Ky., Me., Mass., N. J., Wyo.), nor after notice of withdrawal has been sent in (N. J.).

No member shall be fined more than once for the same default (W. Va.).

No fine shall be assessed for more than 6 months in succession at any one time (Conn., Ky., Me., Mass., Minn., N. H., N. J., R. I.).

No nonborrowing member whose shares are withdrawn, forfeited, or retired shall be charged with fines in excess of the profits distributed (Mass.).

3. Advanced payments of dues and interest may be received, but not more than 6 per cent interest shall be allowed on such payments, nor for a longer period than one year (Cal., N. Y., Wis.). Dues may be paid in advance (La., Md., Mich., Mo., Nebr.); and interest allowed as provided for by act of incorporation and by-laws (La.); not to exceed 8 per cent (Mo.).

LOANS.

1. For the purpose of making loans and transacting other business, stated meetings shall be held (Fla., Ind.); not less frequently than once a month (Ill., Mich.); monthly (Me., Mass., N. H.). Meetings shall be held only in the town or city designated in the agreement of association (Mass.).

2. All loans shall be in money, and notes or bills issued by any association in lieu thereof are void, as are any bonds or mortgages taken in security for the same (Md.).

Loans shall not be made to run a longer period than 10 years (Ariz.).

Loans may be made on which the maximum number of payments shall be definitely fixed (N. Y.); such determination shall be subject to the approval of a designated State official (Mich., Minn.).

No loan to a single person, firm, or corporation shall exceed \$20,000 (Ariz.).

Officers and directors can receive loans only on pledged shares, but this restriction shall not apply to associations doing business in but one county (Colo., N. Mex.).

Not less than 83 per cent of all monthly dues shall be put into the loan fund, no part of which shall be used for expenses other than interest, taxes, and insurance (N. Dak.).

3. The right to preference in allotting loans shall be determined by the by-laws (Oreg.). Applications for loans shall be acted upon in the order of their receipt (R. I.). Premiums may be bid for priority of loan (Cal., Colo., Conn., Del., D. C., Fla., Ill., Ind., Kans., Me., Mass., Mich., Minn., Mo., N. H., N. J., N. Mex., N. Y., N. Dak., Okla., Pa., S. Dak., Tenn., Vt., Wash., W. Va., Wis., Wyo.).

The rate of premium may be fixed by the association (Cal., Ill., Kans., Mich., Minn., Mo., N. Dak., R. I., Va., Wash., Wis.); must be fixed by the by-laws (Ala., Oreg.). The rate shall not exceed 40 cents per share (Me.). Any association may fix a minimum premium at less than which it shall not be required to make loans (N. Dak., W. Va.); the by-laws shall fix such rate (Wyo.).

Borrowers may be required to carry additional shares in lieu of other form of premium payment, the withdrawal value of which shall not be considered in the settlement of loans (N. C.).

Interest may be deducted in advance in lieu of premiums (Pa.).

Premiums may be deducted in gross or distributed and made payable in installments (Cal., D. C., Ill., Ind., Kans., Md., Mo., N. Y., N. C., Okla., Pa., S. Dak., Tenn., Va., W. Va., Wis.).

No loan shall be made on gross premium plan (Me.).

The premium shall be deducted at once (Vt.).

If the installment plan is adopted, it must apply to all loans (Cal.).

In serial associations a borrower shall pay only as many one-hundred-and-twentieths of the premium bid as his stock lacks of being 120 months old (Kans., Mo.).

A borrower may bid for a new loan with the avowed purpose of securing money at a lower premium or interest rate than is paid on the existing loan; if he is successful, the new loan shall be substituted in the existing mortgage (Mass.).

On limited-payment loans the premium bid shall be in the form of the rate of interest to be paid. Each association shall fix a minimum, which shall be not greater than 6 per cent (N. Y.).

Premium bids may be in writing, and may be submitted by persons not members, but who intend to become members if a loan is secured by them, such bids to be considered only in open meeting (Pa.).

Premium shall not be considered as interest (N. H., Tenn.).

4. The rate of interest on loans shall be 6 per cent (Ky., Md., Mass., N. C.); or such lower rate as the by-laws may name (Vt.); shall be not less than 5 per cent nor more than 6 per cent (Me.); shall not exceed the legal rate (Ind.); 12 per cent (Okla.).

If a by-law at any time provides for the acceptance of a lower rate of interest than is paid or has been paid, such rate shall apply thereafter to loans already in existence (Iowa).

5. Premium and interest taken together shall not exceed 1 per cent per month (Ala.); shall not exceed 8 per cent (Iowa); 10 per cent (Kans.); 12 per cent (Ky.); shall not be less than 5 per cent (Mass.); not less than 5 per cent nor more than 8 per cent (Me.).

No premiums, fines, or interest shall be deemed usurious (Colo., Conn., D. C., Fla., Ga., Ill., Ind., La., Mich., Minn., Mo., Mont., Nebr., N. H., N. J., N. Mex., N. Y., N. Dak., Ohio, Okla., Oreg., Pa., S. Dak., Vt., Wash., W. Va., Wis.); but unreasonable charges,

finer, or interest shall be open to investigation and correction (Mo.). State laws as to usury apply (Kans.).

6. Loans made on pledge of shares only must not exceed the valuation of the stock at the last adjustment (N. Dak.); loans may be made to the amount of the withdrawal value (Ill., Me., Mass., Nebr., Oreg., R. I., Utah, Wash., Wyo.); up to 90 per cent (Colo., Iowa, Kans., Mich., Minn., N. J., N. Mex.); 80 per cent (Ky.); 75 per cent (Mo.).

The withdrawal value must exceed the amount of the loan and interest thereon for the term of 6 months (Cal., N. Y., Vt., Wis.).

The amount of dues paid in by any member may be loaned him (Md., N. C., Okla.).

Loans made on other security than the pledge of shares only shall not exceed in amount the par or maturity value of the shares held and pledged as collateral security and may generally be such fractional part thereof as the by-laws may determine.

Almost without exception it is required that the pledge of real estate as security must be by first mortgage, unless the prior mortgage is held by the association making the loan. Several States provide that securities given can not be hypothecated or transferred by the association; also that real estate offered as security must be situated within the State.

Special provisions are as follows:

Loans shall not exceed 50 per cent of the value of the real estate offered as security (Oreg., Wash.); two-thirds (Mich., Nebr.); 80 per cent (N. J.); two-fifths if unimproved (Nebr.).

Real estate taken as security must be situated in the county of domicile of the association (Wis.); must be situated not more than 50 miles from the principal office (N. Y.); must be kept insured against loss by fire or lightning, at the expense of the borrower (Me.).

Any association may, subject to the approval of the State examiner, provide for the adoption of the divided-mortgage plan (Minn.). No association which was not on March 1, 1901, engaged in loaning funds on second or divided mortgages shall thereafter enter upon such business (N. Y.).

As additional security, associations may insure the lives of members and debtors (Idaho); may require the borrower to insure his life for the benefit of the association, the cost of such insurance to be paid by the association, the amount being deducted from the credits or payments of the insured (Ill.).

Personal security for loans may be accepted, as fixed by the by-laws (Ind.).

Shares loaned upon shall be canceled (Md.).

7. If security is not offered within a required time, or if that offered is not approved, the borrower's right to his loan is forfeited and he is charged with one month's interest and the money may be

resold at the next meeting (Tenn.); is charged with one month's interest and expenses incurred (Ill., N. Mex., Vt.), and a fine not exceeding \$1 per share (Okla., S. Dak.); is charged with interest and premium until next meeting, and all expenses (Kans., Ky., Me., Mass., Mich., Mo., N. Y., N. Dak., Wis.); is charged with interest and expenses, and loss of premium, if any, resulting from resale (Fla., Ind., Pa., Wyo.).

8. Loans may be repaid at any time (D. C., Ind., Ky., La., Me., Mass., Mont., N. Y., Ohio, Okla., Pa., Tenn., Vt., W. Va., Wis.); at the discretion of the directors (Cal.); at any time by complying with the provisions of the charter and by-laws (Utah, Va.); at any time by giving 30 days' notice (Ill., Kans., Mich., Mo.); previous payments to be credited with a rate of interest not less than that which the borrower is charged (Ind.).

At least one full year's premium must be paid (Mont., Ohio, Tenn.).

Members shall be charged with the principal, interest, and premiums to date, and arrearages, if any, on shares, and credited with the withdrawal value of shares held and any other credits, the payment of the balance to effect a full settlement (D. C., Ill., Kans., Ky., La., Me., Mass., Mich., Mo., Mont., Nebr., N. Y., N. C., N. Dak., Ohio, Okla., Pa., Tenn., Vt., W. Va., Wis.).

A borrower desiring to prepay his loan may do so by advancing such a sum (not less than the net amount received by him) as will, at the premium that may be obtained, equal the monthly interest payments he undertook to make; or he may deposit the full amount due on his note and receive a release of his mortgage, when he shall also be entitled to a return of premium secured on the sale and reinvestment of the money (Fla.); shall deposit the full amount of the loan, less the proportionate part of premium unearned, and shall receive his stock clear of obligations, which shall then be subject to withdrawal as other stock (Wyo.).

Borrower shall repay principal, interest, and premium to date, together with fines and other charges. Payments made upon pledged stock shall not be considered as payments on the principal of the loan (S. Dak.).

Settlements made between meetings take the date of the next subsequent meeting (Ill., Kans., Ky., Mass., Mo., N. Y., Vt., Wis.).

An amount may be charged for the privilege of prepayment (Va.).

Loans may be paid off in full and borrowers retain their shares clear of all obligations (Kans., Ky., Me., Mass., Mich., Mo., N. Dak., Vt., Wis.).

Payments of sums equal in value to one or more shares shall be accepted, and shares canceled proportionately (Ill., Ky., La., Vt., Wis.). Partial payments in sums of \$50 or multiples thereof shall be accepted, and for each \$200 paid one share shall be released from pledge (Mass.).

income for 6 months (Mo.); 30 per cent of the dues actually paid in (N. J.).

A majority of all directors must assent (Ill., N. Y.); two-thirds (S. Dak.).

No association doing business in the State shall have power to borrow money (Kans.).

2. Such sums shall be repaid within 1 year (Conn., Ill., N. J., N. Y., Wis.); 2 years (Mo.); as soon as accumulations suffice (Pa.).

The rate of interest paid on borrowed money shall not exceed the legal rate (Ohio); 6 per cent (Pa.).

ACCOUNTS.

1. Accounts shall be kept by double entry (Mass.), and a trial balance shall be made and declared each month (Me., Nebr.).

A cash book shall contain classified entries and shall be closed at the end of each month and shall be an exhibit of all receipts for the month (Me., Mass.).

The bank commissioners shall have power to prescribe the form of books to be used (N. H.).

2. Each member shall have a pass book in which all payments shall be entered (Me., Mass., Nebr., N. J.).

3. All books, papers, securities, and accounts, including as far as possible the pass books of members, shall be examined and verified annually (N. J.).

There shall be a verification of the due book of each shareholder with the books of the association to which he belongs every four years (N. H.).

4. All payments made by the corporation shall be by order, check, or draft on the treasurer, signed by the president and secretary, and indorsed by the payee (Mass., Mo., Ohio).

PROFITS, LOSSES, ETC.

1. Profits and losses shall be apportioned at least annually (Cal., Conn., Ill., Ky., La., Me., Mass., Mich., N. H., N. Y., S. Dak., Vt.); and whenever a new series is issued (Me., Mass., Vt.).

Dividends may be declared from time to time (Kans., Mo.); at least annually (Nebr.); annually or semiannually (Mont., Ohio, Utah, Wis.). Passbooks of members shall be credited annually with the amount of earnings due, except in associations doing business on terminating or serial plans (Ind.). Net earnings shall be apportioned annually, semiannually, or quarterly (Iowa).

Distribution shall be in proportion to the value of shares existing at the time, and shall be computed on the basis of a single share fully

paid to date (Ky., Me., Mass.); shall be according to the actual value of shares, as distinguished from their withdrawal value (Cal., Vt.).

Pledged shares participate in profits the same as free shares (D. C.).

Holders of permanent stock may receive their dividends in cash (La.).

A special dividend, not exceeding the amount of the entrance fee, may be made to each share outstanding in the last series issued prior to the distribution (Vt.).

No dividend shall exceed the actual earnings, actually collected (Me.). Interest due and unpaid for a period longer than 6 months shall not be considered as earnings (La.).

Gross premiums shall be apportioned over a period fairly estimated to mature the shares on which they were bid and shall not be considered as fully earned until the expiration of such period (N. J.).

Losses must be apportioned at the date of their occurrence (Ky., Me., Mass.).

The reserve fund must be exhausted before losses are charged to shares (Conn., Mont., Ohio).

If losses exceed the reserve fund and profits earned, no sales of stock shall be made until such losses have been distributed pro rata among the shares in force (Minn., R. I.).

The liability of any member for losses is limited to the book value of the shares held (R. I.).

Present and past shareholders are liable for debts incurred during their membership in proportion to the number of shares held, but past members shall be relieved from liability if no action is brought within one year after retiring (Idaho).

2. All expense charges shall be paid out of earnings (Ind., Iowa, La., Mich., Minn., Ohio). No deductions shall be made from stock payments for running expenses (N. Y.). Expenses shall be met as provided for in the by-laws, but after an association has been organized two years they shall be paid from earnings only (Mont.).

Besides admission fees not more than 10 cents per share per month may be set aside as an expense fund (Oreg.); \$1 per share per year (Wash.). If loans are made to nonmembers, 1 per cent per annum of the principal of such loans may be set aside for expenses (Wash.).

Expense charges are limited to 3 per cent of the assets of associations having a capital of \$100,000 or less, ranging to 2 per cent in associations having a capital of more than \$500,000; but no association shall permit expenses of more than \$12,000 in any one year (Iowa).

Salaries, commissions, and operating expenses shall not exceed the total receipts from admission or membership fees and 1 per cent of all outstanding loans, investments, and equities in real estate; but this restriction does not apply to associations whose assets are less than \$25,000 (N. J.).

the portion of the expenses shall be charged against net profit at each distribution and the remainder of such earnings, the remaining one-fifth to be carried in a permanent reserve fund which shall be a charge against the earnings of the association in the final statement of the association.

A fund shall be set aside from the net earnings of not to exceed 10 per cent of the net earnings of the association of the installment shares of the association, and the net earnings of such shares may be carried in a separate fund as provided in § 211.

At least 5 per cent of the net earnings of the association shall be set aside from the net earnings of the association to be carried in a reserve fund arising from the depreciation of the assets of the association. N. Y., S. Dak.; any sum not exceeding 5 per cent of the net profit. Va.). A reserve fund may be maintained out of earnings in amount of 5 per cent of the assets (Ind.). At least 1 per cent of the net earnings shall be set aside at each apportionment until such fund shall equal 5 per cent of the dues capital (Conn.); 5 per cent of the net earnings outstanding (Mich.); not less than 1 per cent nor more than 5 per cent until the fund equals 5 per cent of the dues capital; such fund to be thereafter maintained at not less than 5 per cent of the dues capital (Mass.); not more than 10 per cent (Ill.). At least 5 per cent of the net earnings shall be set aside until the fund equals 25 per cent of the outstanding loans (La.); not less than 5 per cent nor more than 10 per cent until the fund equals 5 per cent of the dues capital (Mont.); at least 5 per cent until the fund equals at least 5 per cent of the outstanding loans (Mont., Ohio, Wis.). Not less than 5 per cent, nor more than 10 per cent shall be set aside from the net earnings and there is a reserve fund (Minnesota). In all but serial associations, 5 per cent of the net earnings shall be set aside each year until the amount equals 5 per cent of the total assets, exclusive of cash on hand; this fund may, by a vote of a majority of the directors and the approval of the State banking board, be increased to 10 per cent of the assets (Nebr.).

Such fund shall not be considered a part of the full value of stock in liquidating, surrendering, or withdrawing shares (S. Dak.).

Maturing shares receive such share of the reserve fund as the directors may determine (Wis.).

If unpaid interest, premium, or fines are carried on the books as assets, at least 5 per cent of such items shall be set aside at each distribution until a fund is provided equal in amount to at least 25 per cent of all such items existing at the time of any distribution (Mass.).

REPORTS.

1. Annual reports shall be made to a designated State official or board showing the conduct of business since last report and the financial condition of the association at the date of the report (Ala., Cal.,

Del., Ga., Ill., Ind., Iowa, Ky., La., Mass., Mich., Minn., Mont., Nebr., N. J., N. Y., N. C., N. Dak., Ohio, Oreg., R. I., S. Dak., Tenn., Utah, Vt., Wash., Wis., Wyo.); reports are semiannual (Kans., Okla.).

Reports must be filed annually in a designated county office (N. Mex.); semiannually (Colo.).

Officers of associations must supply all returns required (Mo., Mo.); must make annual report of capital, liabilities, and assets to county assessor (Ark.).

A copy of the by-laws and of all published literature shall also be filed (Ala., Tenn.); with first annual report, a certified copy of the constitution and by-laws (Mont., Ohio).

Associations must also file with a State official a copy of the semiannual reports to stockholders (Minn.).

The report shall include salaries paid each officer and agent, together with their names (Iowa, N. J.); reports of foreign associations shall also give name, address, and number of shares held by each shareholder resident in the State (Iowa).

The fee for filing reports is 50 cents (Colo., N. Mex.); \$1 (N. J.); \$2 (Ill.); \$5 (N. C., Oreg., Utah); \$10 (Ala., Ga., Iowa, Tenn.); \$25 (Wash.); 10 cents for each \$1,000 assets (Kans.). 20 cents (Mo.); ranges from \$3, when the assets amount to \$50,000 or less, to \$25, when assets exceed \$500,000 (Mont.); to \$50, when assets exceed \$1,000,000 (Ohio).

2. Each association must furnish annually to its members a statement of its transactions and financial status (Idaho, Ind., N. J., N. Y., Wis.); semiannually (Kans., Minn., Mo.).

Reports shall be published annually in one or more suitable newspapers (Mich., Mont., Nebr., N. C., N. Dak., Ohio, Utah); semiannually (La., Mo., Okla., Tenn.).

A report shall be submitted by the secretary to the stockholders at their annual meetings (Wyo.).

SUPERVISION.

The authority of a supervising board or official in general extends to the examination of all books, papers, and securities, an accounting of cash, and the power to send for and examine under oath any officer or employee of any association; also, where illegal or unsafe conditions exist, a time for rectifying the same is allowed, which failing, application may be made for an injunction against the further transaction of business and for the appointment of a receiver. In several States the affairs of such association may be managed by the board or official until better conditions are secured or the appointment of a receiver is found necessary.

Other provisions as to supervision follow:

1. A designated official or board of the State must visit every association doing business in the State at least once each year, investigate its management and condition, and make report thereof (Cal., Conn., Ill., Iowa, La., Mass., Mich., Minn., Mont., Nebr., N. Y., R. I., S. Dak., Tenn., Utah, Wash.); twice a year (Me., N. Dak.); at discretion (Kans., Mo., Vt.), but not oftener than once a year (Kans., Mo.); at least once in two years (N. J., Wis.).

A designated official examines required annual reports, and may, if in his judgment the report warrants such action, investigate the conduct and condition of any association, or such investigation may be made at the request of a shareholder or shareholders giving bond for the expenses of the same (Ind.).

A State official may make an examination of the affairs of any association when in his judgment a necessity exists (Ohio). A State official or board prescribes the questions to be answered in the required reports (Ala., Del., Mo., Mont., Nebr., N. J., N. Dak., Tenn.). Associations are under the supervision of a designated official (Ky.). A State official shall ascertain by examination whether proper deposits are made as required (Oreg.). The bank commissioners shall require the selection of an approved examiner to verify the passbooks of members once every four years and report to them the results of such verification (N. H.). An appraisal and valuation of all real estate held by any association may be made, if necessary, the expense to be borne by the association (Minn.).

The inspector's report shall contain a detailed statement of salaries and compensations paid, and names of officers and employees receiving the same (Iowa, Wis.).

Examinations may be made at the request of 3 members (S. Dak., Vt., Wyo.); 5 members (N. Mex., Wis.), who shall guarantee expenses (Wis.); on demand of 20 members (Del.); of 10 per cent of the subscribers to stock (Mont.); of a shareholder or shareholders who shall file a bond for costs and expenses if the association is found to be solvent and safe (Tenn.).

2. The expenses of supervision are charged against the associations of the State pro rata on the basis of the number of shares in force (Cal.); on the basis of the amount of capital and surplus (Conn.); in proportion to their assets (N. Y.).

The minimum charge against any association shall be \$10 per year, or \$1 per month for parts of a year (Cal.). Charges shall not exceed one-eightieth of 1 per cent of the assets in the case of domestic associations; foreign corporations shall pay the actual expenses of investigation (Conn.).

Each association shall pay a reasonable compensation for services, shall bear expenses (Ill.). The cost of the quadrennial verifica-

tion of its pass books shall be borne by each association (N. H.). Each association shall pay necessary expenses, not to exceed \$20 in any one year (N. J.); \$50 (R. I.); shall pay \$15 per day and not less than \$15 nor more than \$30 for each examination (Utah); shall pay \$5 per day and necessary expenses (Ind.).

If the examination is by a State official he shall receive his expenses; if by an appointee he shall receive \$5 per day and his expenses (Iowa); \$10 per day and expenses (N. Y.); but the total cost in one year shall not exceed \$200 (Iowa). The fee is \$20 for each association (Oreg.); \$20 for the first \$100,000 assets and \$10 for each additional \$100,000 or fractional part thereof (Minn., N. Dak.); but if the capital exceeds \$600,000 the fee for each \$100,000 in such excess is \$5 (Minn.). The fee ranges from \$15 when the capital is \$15,000 or less, to \$30 when it exceeds \$150,000, and shall be paid but once a year (Nebr.); from \$15 when capital is \$100,000 or less, to \$50 when it exceeds \$1,000,000 (La.). The fee is one seventy-fifth of 1 per cent of the gross assets, but shall not be less than \$20 nor more than \$100 in any one year (Mich.); is one-twentieth of the assets, but shall not be less than \$20 nor more than \$50 per annum for any domestic association, and not more than \$200 for any foreign association (Mont.).

The cost of an investigation requested by 20 members shall be borne by the association unless it be found to be insolvent (Del.).

The expenses of supervision are met by the State; but if any State charges a fee for the examination of associations chartered in this State and doing business in such other State, associations chartered in such State shall be charged the expenses of examination in this State (Ohio).

The fee of the supervisor for managing the affairs of a solvent association and enabling it to resume business shall not exceed 5 per cent of the assets (Mo.).

TERMINATION.

Termination takes place in regular order when all shares have been redeemed by loans or advances, or whenever the assets are sufficient to pay off free shares at their fixed value, and may be provided for in the constitution and by-laws of any association, in accordance with the statutes controlling.

1. Associations may be dissolved by a majority vote, subject to the vested rights of shareholders (Conn., Fla., Ill., Ind., Iowa, Mass., Mich., Minn., Mont., Nebr., Ohio).

2. Two or more associations may by agreement unite and form a single association (Idaho, Ind., Iowa, Kans., La., Mich., Minn., Mo., Ohio, S. Dak., Utah); or an association may transfer its engagements and property to another (Idaho, Kans., La., Mich., Mo., Mont., Ohio, Wis.).

Shareholders not approving of merger or transfer to another association shall receive the value of their stock or have the same credited on loan if they are borrowers (Mich.).

3. Petition properly supported, insolvency, or improper business procedure are, as in other corporations, sufficient grounds for proceedings for a receivership.

The supervisor of building and loan associations may procure the appointment of himself as receiver for the winding up of the affairs of any insolvent association (Mo.).

The receiver's fee shall not exceed 3 per cent of the funds handled. Attorney's fees shall not exceed \$1,000, besides fees for separate foreclosures (Ill.).

FOREIGN CORPORATIONS.

Associations incorporated in another State or in a foreign country, desiring to do business in any given State, are required in general to conform to the requirements of such State in relation to the control and supervision of domestic corporations of the same class. A number of States provide additional regulations, as follows:

1. Foreign building and loan associations, before beginning business in this State, must procure a certificate or license (Ala., Conn., Del., Ill., Iowa, Kans., Ky., La., Minn., Mo., Mont., Nebr., N. H., N. J., N. Mex., N. Dak., Ohio, Pa., R. I., S. Dak., Tenn., Utah, Vt., Wash., Wis.); which must be renewed annually (Conn., Ill., Iowa, Kans., La., Minn., Mo., Mont., Nebr., N. H., N. J., N. Mex., N. Dak., Ohio, Pa., S. Dak., Tenn., Vt., Wash., Wis.).

The fee for filing application for license is \$25 (S. Dak.); \$100 (Mo., Ohio); \$10 for each \$100,000 of capital stock or fraction thereof actually issued and in force, and at the same rate for any increase (Mont.).

The fee for issuing the certificate or license is \$3 (Utah); \$10 (Tenn.); \$20 (Minn.); \$25 (Ky., N. H., R. I.); \$50 (Ill., Iowa, Kans., Mo., Ohio); \$100 (Del., Mont., Pa.); \$250 (N. J.); \$2 for each \$1,000 assets (N. Mex.); \$10 when the capital is \$50,000 or less, and \$5 additional for each added \$50,000 or fractional part thereof, but no fee shall exceed \$50 (Vt.).

The fee for renewal is the same as for original issue except in Illinois, where it is \$25.

2. A copy of the constitution and by-laws and a statement showing the financial condition of the association must be filed with a designated State officer (Ala., Colo., Conn., Del., Fla., Ga., Ill., Ind., Iowa, Kans., La., Mo., Mont., Nebr., N. H., N. J., N. Mex., Ohio, R. I., S. Dak., Tenn., Utah, Vt.); also a copy of the laws under which the incorporation was had (Colo., Nebr., N. Mex.). The statement must show the salaries paid each of the officers (N. J., Utah).

Certified copies of the articles of incorporation must be filed (Mich., Minn., N. Dak., Oreg., Wash., Wis.), and all printed matter issued by the association (Wis.).

A statement of the financial condition must be filed (Pa.).

The fee for filing is \$5 (Oreg.); \$20 (N. J.); \$25 (Ala., Fla., Minn., Tenn., Wash., Wis.); \$50 (Ga.); \$100 (Iowa, Kans.); \$50 if the capital does not exceed \$1,000,000 and an additional one-fourth of 1 per cent on stock in excess of that sum (Colo.); \$200 if the capital stock does not exceed \$1,000,000 and an additional fee of one-fourth of 1 per cent on the excess, if any, over \$250,000 (N. Mex.).

A State official shall make a preliminary examination of the financial condition (N. J., Wis.).

Associations applying to do business in the State must give proof of solvency and proper management (Ky.); must have a capital of not less than \$100,000 (Ala., Tenn.); \$500,000 (N. H.); must have assets of not less than \$100,000 (N. Mex., R. I.); \$300,000 (Vt.); must hold first-mortgage securities of a bona fide value of \$50,000 (S. Dak.).

3. A fund of \$25,000 in cash or approved securities must be deposited with a State official or a designated depository in the State for the protection of the members who are citizens of the State (Fla., Mont., N. Dak., Vt.); \$30,000 (N. J.); \$50,000 (Cal., Kans.); \$100,000 (Ill., Ind., Iowa, La., Mo., Ohio, Pa., Wis.); or bond may be given in the required amount (Kans.).

Associations must deposit \$25,000, and a sum thereafter equal to 15 per cent of the payments made by the citizens of the State (Me.); must deposit all mortgages and other securities taken by them in this State (Mont., Wash.); if these amount to less than \$25,000, added securities must be deposited to make up that sum (Wash.). If assets in the State do not exceed liabilities, securities shall be deposited in sufficient amount to secure any judgment against the corporation (Del.).

If the deposit is with the State treasurer, he shall have an annual fee of \$25 (Fla.).

Associations desiring to do business in this State shall have on deposit in trust for all its members and creditors the sum of \$100,000 in securities, and must file a certificate of the fact with a State official (Minn., Oreg., Wash.); must deposit in this or other State 75 per cent of all securities and 75 per cent of all interest and dividends thereon (Ga.).

Instead of a deposit, a contract may be made with a trust company for the payment of the required deposit if the association refuses promptly to pay any indebtedness due a citizen of this State (Ind.).

4. Associations must appoint some person, usually a designated officer of the State, to act as their attorney to accept service of process in suits brought by residents of the State (Colo., Conn., Del., Fla., Ga., Ind., Iowa, Kans., La., Mich., Minn., Mo., Mont., N. J., N. Mex.,

N. C., N. Dak., Ohio, Oreg., Pa., R. I., S. Dak., Tenn., Vt., Wash., Wis.); must appoint such attorney in each county where they do business (Nebr.); must agree not to remove to a United States court any action begun in a State court (Minn., Mont., Wash., Wis.); must guarantee \$100 attorney's fee in any action in which judgment is recovered by a citizen (Ind.).

5. Reports showing the business transacted and the status of the associations must be made annually (Colo., Fla., Ind., Iowa, Ky., N. H., N. J., N. Mex.); semiannually (Kans., Mo., Vt.).

The fee for filing such reports is \$5 (Ind.); \$10 (Ky., S. Dak.); \$20 (N. J.); \$25 (Colo., Fla., N. Mex.). The fee ranges from \$3, where assets are \$50,000 or less, to \$50, where they exceed \$1,000,000 (Iowa, Kans., Mo.).

6. A State official shall cause an examination of the affairs of each foreign association doing business in the State, at the cost of said association, to be made annually (Vt.); at least once in two years (R. I.); when he shall think necessary (Tenn., Utah).

The fee is fixed at \$25 when assets do not exceed \$25,000; \$50 for assets from \$25,000 to \$100,000, and \$10 additional for each added \$100,000 or major part thereof up to \$1,000,000, and \$5 additional for each \$100,000 or major part thereof in excess of \$1,000,000 (Tenn.); \$15 per day and not less than \$15 nor more than \$30 for each examination (Utah). The fee for examining the financial condition and business methods shall be \$50 for the first \$100,000 net assets and \$5 for each additional \$100,000 or major portion thereof, the total not to exceed \$100 (R. I., Vt.).

7. Agents shall each have a certificate to be renewed annually, and the fee for the same shall be \$1 (Pa.); \$2 (Ind.); \$10 (Wis.); \$25 (Ky.); \$5 for each traveling agent (Tenn.). The fee for a certificate for each agency is \$5 (N. J.); \$250 for each county (Fla.).

8. A privilege tax is levied ranging from \$25 on associations receiving monthly dues not exceeding \$500 from residents of this State to \$250 where such payments amount to more than \$3,000 (Miss.); ranging from \$50 where capital does not exceed \$100,000 to \$250 for a capital of \$1,000,000 or more (Tenn.).

A tax of one-fourth of one per cent is levied on the dues collected from residents of the State, less withdrawals and loans within the State (R. I.); of 3 per cent of the excess of collections in the State over loans (Ind.).

9. Associations of any State which subjects associations of this State desiring to do business therein to requirements as to taxation, deposits, or other restrictions in excess of those imposed by this State under like conditions, shall, when engaging in business in this State, be subject to reciprocal requirements and obligations (Ala., Colo., Ga., Iowa, Minn., N. H., N. Mex., Oreg., S. Dak., Tenn., Vt., Wash., Wis.).

BENEFITS.

Much has been said in regard to the benefits conferred by these institutions upon their members and their influence upon the community in general. Aside from the financial advantages derived by their shareholders there is undoubtedly a large measure of what have been aptly termed "invisible assets" which may be placed to their credit. First among the advantages conferred is that of providing a means whereby the workingman may save for home building. It is almost a truism to say that the community or State counting among its inhabitants the greatest proportion of home owners contains also the greatest proportion of prosperous, contented, and conservative citizens. In the testimony before the Industrial Commission it was very strongly impressed upon the Commission that the influence of these institutions upon industrial life was conservative, tending toward the prevention of disputes and strikes and making for industrial peace. The home owner acquires a real and tangible interest in the community and its welfare as well as an increased self-respect and more elevated moral standard. He rises as well in the esteem of the community and, to a degree at least, attains economic independence. That workingmen have taken advantage of the opportunities offered by building and loan associations for acquiring homes was demonstrated by the report of the Department of Labor to which reference has previously been made. It was there shown that the 4,444 associations from which reports were secured were the means through which the very considerable number of 314,755 homes were acquired by their shareholders, and that, in addition to these, the members of 4,422 of these associations acquired 28,459 other buildings. That these homes were acquired in a large measure by working people, thus carrying out the original purpose of these associations, is conclusively demonstrated by another table given in the report which comprises the results of an inquiry as to the occupation of the shareholders in a total of 921 representative associations. The table shows that in 909 of the local associations investigated there were 159,223 shareholders, while in 12 of the national associations there were 15,547. In the local associations nearly 70 per cent of the whole number of shareholders were working people, while in the national associations they constituted a little more than 54 per cent. There were included in this category the following classes: Accountants, bookkeepers, etc.; artisans and mechanics; farmers, gardeners, etc.; housewives and housekeepers; laborers; mill and factory employees; and salesmen and saleswomen. The remaining 30 per cent in the local associations and 46 per cent in the national associations consisted of agents, bankers, brokers, etc.; corporation officials; government officials and employees; hotel, boarding-house, and restaurant keepers; lodges, churches, and societies;

manufacturers, contractors, capitalists, etc.; merchants and dealers; persons engaged in the professions; and superintendents, foremen, etc.

Whether the saving of a portion of his earnings be for the ultimate purchase of a home or for some other purpose, the inculcation and encouragement of the habit of saving in the workingman may be termed one of the beneficial results of these institutions. With the definite object in view of accumulating a sum equal to the ultimate value of his shares by small and regular payments to his association there follow, in a greater degree, self-respect, industry, temperance, frugality, and many other qualities which render him of greater value as a citizen. The opportunity for safe and profitable investment of small sums afforded by these cooperative institutions and their careful and economical management have undoubtedly greatly encouraged this habit of saving and all the good that results therefrom.

In most of the smaller associations, at least, we have seen that the shareholder maintains a very intimate relation with his association, taking part to a degree in its management and the formulation of its methods of operation. The business training and knowledge of affairs gained through his connection with the association, together with the business association with his fellow-shareholders, may be said to constitute a third benefit conferred by these institutions.

It must be conceded that the practical operation of these institutions for many years has shown the feasibility and practicability of the plans upon which these operations are based. It is believed that the opportunity afforded in the way of the secure investment of small sums is in itself a benefit both to the individual and to the community. The extremely small proportion of profits required for the expenses of management in local building and loan associations and the degree of safety afforded to investors combine to render their services most valuable. It is both gratifying and encouraging to note that the losses sustained by these associations by reason of inadequate security are not only infrequent but inconsiderable. From the report of the Department of Labor it is ascertained that the total loss incurred by the 5,440 associations reporting as to losses during their entire existence was less than half a million dollars, or an average of less than \$100 for each association. Surrounded as such institutions are to-day by legal restrictions and regulations, and with the increased experience of ten years in their management and operation, it is safe to assume that the associations in existence at the present time would show even smaller losses than those of a decade ago, and it is indeed doubtful if any other class of financial institutions has rendered such uniformly beneficial results to the wageworker or so perfectly meets his needs as a means of saving and home gaining.

THE REVIVAL OF HANDICRAFTS IN AMERICA.

BY MAX WEST, PH. D.

I. DOMESTIC WEAVING AND RUG MAKING.

The domestic industry of spinning and weaving, which still flourished in the rural districts of America during the first half of the nineteenth century, has retreated so rapidly before the aggressive competition of textile factories that instead of a spinning wheel and loom having a place in nearly every farmhouse, it is now quite exceptional to find either the appliances or the ability to use them. Looms have been relegated to attics and lumber rooms; or left behind in moving from place to place; while spinning wheels have been preserved chiefly as curiosities by the grandchildren of those who used them last, and have even become articles of ornament for the decoration of drawing-rooms. It is not uncommon to find an elderly woman or man who still weaves rag carpets for as many of the families of a town or village as save their rags for the purpose; but the more difficult kinds of weaving and the wearing of homespun stuffs have gone out of fashion, except in remote and isolated communities. A Minneapolis firm, whose customers are chiefly Scandinavian immigrants on western farms, still occasionally sells spinning wheels for use rather than for ornament; but the cheapness of factory cloth has made its influence felt by changing even the habits of these immigrants, as well as of the native Americans who still live in an otherwise primitive fashion among the mountains of the South.

In certain localities, however, systematic efforts are being put forth to revive the domestic textile industry before it becomes wholly a lost art. It is the main purpose of the first part of this article to record the progress of these revivals, which are found chiefly in the southern mountains, and of the similar efforts which are being made to rehabilitate and improve the hooked-rug industry among the hills of New England.

In the South these philanthropic efforts have been inspired mainly by the excellence, in both durability and beauty, of the old-time coverlets, or "kivers," which have been preserved in many mountain homes. These coverlets consist of a cotton foundation overshot with colored wool so as to form the pattern. Intended originally for bed covers, they were woven in strips a yard wide by about $2\frac{1}{4}$ yards long:

such strips, or occasionally three of a narrower width, being sewn together to make a cover of the desired size. The wool was dyed usually with indigo or madder, though various other vegetable dyes were sometimes used. The different patterns are distinguished by fanciful names, suggested sometimes by the pattern itself and sometimes by some historical incident. The historical names indicate that some of the patterns date back at least to the time of Washington, while others were named as late as the period of the civil war. The weaving of these coverlets was a difficult art, requiring a loom with at least four treadles and with one shuttle for the cotton and another for the colored wool. In weaving in an unfamiliar pattern the weaver was guided by a "draft," a sort of diagram or table intelligible only to the initiated, showing by lines or figures where the colored threads should be placed. The variety and ornamental character of the designs have suggested to modern admirers the use of the coverlets for a number of purposes, as for couch covers, table covers, etc., and, in separate strips, for portières and window draperies.

Numerous specimens of this old-fashioned ornamental weaving have been found in recent years in eastern Kentucky and Tennessee, West Virginia, western Virginia and North Carolina, and to some extent in northern Georgia. But while the coverlets are most commonly found in these more or less remote mountainous regions, some of the finest specimens which have been preserved are the product of southwestern Ohio. Mrs. Andrew L. Harris, of Eaton, Ohio, has two veritable masterpieces of the coverlet weaver's art woven about half a century ago by a man who lived in Butler County. These are heavy, closely woven, apparently all wool, double blue and white coverlets, exceptionally intricate in design and with elaborate borders on all four sides. In one of them, instead of the usual square figures, the pattern represents leafy bowers amid which birds are singing and feeding their young. They must have been woven on a loom having six or eight treadles and by an unusually skillful weaver.

But the revivals of domestic weaving have not been confined to any single class of fabrics nor to any one section of the country; and, first of all, attention is called to a pioneer work in the encouragement of plain cotton weaving in the lowlands of Louisiana.

THE ACADIANS OF LOUISIANA.

In the Attakapas region of southern Louisiana, about midway between New Orleans and the western boundary of the State, is a scattering settlement of French-speaking farmers descended from the Acadians who were expelled from Nova Scotia in 1755. Living apart from more recent comers, they have preserved not only their own language and national traits, but to some extent also the manners and customs of the last century. Much of the cotton grown on their farms is still hand carded, homespun, and woven by hand on rude looms such as

their ancestors used a century and a half ago. All of this work except the raising of the cotton, and in some cases even that, is done by the women in addition to their regular household duties.

Before the war of secession it was common for the southern Louisiana sugar planters and their families to wear suits of the Attakapas cottonades woven by the Acadian weavers, who thus found a ready market for their surplus product. The war interrupted this demand, and the subsequent depression threatened to destroy the industry. It received a new impetus through the efforts of Mrs. Sara Avery Leeds, of Avery Island, Louisiana, who was brought up in the neighborhood of the Acadians and has for many years devoted herself to the encouragement of their handicraft. The Christian Women's Exchange of New Orleans afforded a convenient salesroom, which still remains the principal headquarters for the sale of these goods, though orders are now taken in New York and elsewhere. Mrs. Leeds took five of the Acadians to the World's Columbian Exposition at Chicago, where they reproduced an Acadian interior with their spinning wheels and looms and showed the methods and products of their industry as part of the Louisiana exhibit. Specimens of the product were also exhibited at the Cotton Exposition at New Orleans in 1885-86, at the Buffalo and Atlanta expositions, and elsewhere, winning a blue ribbon at New Orleans, a gold medal at Atlanta, and honorable mention at the Minneapolis Industrial Exposition in 1886.

The fabrics are woven to order for the most part, and the orders have increased of late until they now equal the productive capacity of the twenty-five or thirty families regularly engaged in the industry. An Acadian woman assists Mrs. Leeds by giving out the orders. When an order is executed the finished product is brought by boat or by wagon a distance of from 10 to 25 miles, to Mrs. Leeds, who inspects and measures the cloth and discards any inferior work. The women are so faithful that poor work is not often found. The cost of transportation and the commission charged by the Women's Exchange or other agency having been deducted from the price, the remainder is sent to the producer. In some cases the price is advanced to needy workers.

The Acadians do not attempt any intricate patterns, but weave in small checks and stripes, as well as plain and mixed goods. They make two main classes of homespun goods—the strong, durable Attakapas cottonade suitings or art cloth, and soft cotton-flannel blankets or “couverts,” which are sold as “Evangeline portières.” The suitings are sold for from \$1.10 to \$1.60 a yard; the portières are somewhat more expensive. Except for occasional narrow stripes of red, no dye but the original indigo is permitted to be used. A variety of colors is obtained by using white cotton and the yellow nanke cotton undyed, as well as the different shades of blue.

Besides these homespun cloths the Acadians weave rag carpets, combining a great variety of colors, and of finer texture than is often found elsewhere. Some of the older women also make hand-spun and hand-netted fringes.

In Harper's Magazine for February, 1887, Mr. Charles Dudley Warner described the Acadians and their products in the following language:

They are a self-supporting community, raise their own cotton, corn, and sugar, and for the most part manufacture their own clothes and articles of household use. Some of the cotton jeans, striped with blue, indigo-dyed, made into garments for men and women, and the blankets, plain yellow (from the native nankeen cotton), curiously clouded, are very pretty and serviceable. Further than that their habits of living are simple and their ways primitive, I saw few eccentricities. The peculiarity of this community is in its freedom from all the hurry and worry and information of modern life.

Mrs. Leeds says that while the Acadians still generally spin and weave for themselves and their neighbors, the custom is falling into disuse even among this primitive people; but she purposes extending and systematizing her work for the promotion of the industry.^(a)

ASHEVILLE, N. C.

In 1894 Mrs. Susan Chester Lyman, after a preparatory residence at Hull House, Chicago, went to live in a well-finished log cabin which had been built for the purpose near Asheville, N. C., and there established the Log Cabin Settlement for the benefit of the neighboring mountaineers and their children.

Among the various lines of work undertaken was the encouragement and promotion of coverlet weaving, which even in this region had almost died out. Orders were received from numerous friends in the North, and in giving them out to the mountain women an effort was made to discourage the use of aniline dyes, which were beginning to be used in place of the old-time indigo and madder. As the industry developed it required a regular headquarters, and the Asheville Exchange for Woman's Work undertook the sale of the product at its salesroom on Court Square, in Asheville. A commission was now charged on the sales, but the weavers gained the advantage of a wider market through the popularity of Asheville as a winter resort.

One of the most skilled of these mountain weavers, Mrs. Emma A. Duckett, has moved into Asheville to devote all her time to the industry. In one room of her cottage there are two looms, at which she and her son weave not only the colored coverlets, but also white counterpanes,

^a Mrs. Margaret Avery Johnston has compiled from various sources a book entitled "In Acadia," containing an historical sketch of the Acadians and descriptions of their surroundings and manner of life. The book is commonly bound in Attakapas cottonade, and is published by F. F. Hansell & Bro., New Orleans.

towels, etc. To meet a demand for a fabric similar to the coverlets, but heavy enough to be used for rugs, Mrs. Duckett uses doubled and twisted yarn, and thus adapts the methods and patterns of coverlet weaving to the making of washable rugs. She now engages half a dozen mountain women to card and spin the woolen yarn in their homes, while two other women, who live with her, twist cotton yarn for the rugs; thus she is enabled to devote her time to weaving and dyeing. Her dyes she makes herself. She won a silver medal at the Buffalo Exposition and has exhibited her products at the Teachers' College and at the National Arts Club in New York City.

The price for coverlets or portieres of the usual weight is \$1.50 per square yard; for the double weight, suitable for rugs or heavy portieres, \$2.50 per square yard. Among the patterns used in and near Asheville are the "Old Duckett," "Battle union," "Double bowknot," "Snowdrop," "Young man's fancy," "Lady's delight," and "Chariot wheels," or "Miss Chester" patterns.

Rag carpets are also woven by several women near Asheville, and are for sale at the Exchange for Woman's Work, which also offers woolen blankets, palmetto hats, and various other handmade articles, including willow and split-bottomed baskets, fashioned in mountain cabins.

THE ALLANSTAND COTTAGE INDUSTRIES.

The Allanstand Cottage Industries have been developed by Miss Frances L. Goodrich at Allanstand, Madison County, N. C., where she is in charge of the social work conducted under the auspices of the Woman's Board of Home Missions of the Presbyterian Church, in connection with several mission day schools in that vicinity. Miss Goodrich first began the encouragement of hand weaving ten years ago at Britains Cove, Buncombe County, at about the same time that the Log Cabin Settlement was built near Asheville. The gift of a well-preserved home-woven coverlet about forty years old suggested the revival of that industry as a means of bringing material aid to the mountain women. A beginning was made by purchasing wool from farmers in the nearest valley and having it made into yarn by women in the neighborhood who still preserved their spinning wheels and had not forgotten the art of carding by hand. The secrets of the indigo pot and of dyeing by barks and leaves were learned from some of the older women, and the hand-spun yarn was "dyed in the wool." Although a number of women at Britains Cove could weave plain linsey and jeans, the intricate "double-draft" coverlet weaving was a more difficult matter, involving the use of four sets of harness and four treadles instead of two. It was necessary to go 16 miles away, farther back from the railroad, to find a family where this art was still practiced. Here the yarn was woven into coverlets, and were soon sold, and the continued demand encouraged a

woman at Brittain's Cove to learn the double draft. An old loom was bought and more spinners set to work.

Two or three years after this Miss Goodrich shifted the scene of her labors to Allanstand, in the next county, farther from towns and railroads, where weaving and dyeing were not yet lost arts. From the weavers of this region she has collected more than seventy "drafts" or patterns for coverlet weaving, some of which, however, were found to be duplicates under different names. Fifteen or twenty of the best patterns have been selected for use. Among them are the "Double snowball," "Double bowknot," "Rattlesnake," "Whig rose," "Pine burr," "Missouri trouble," "Beauty of Kaintuck," "St. Anne's robe," "Orange peeling," "Wheel of fortune" or "Iron wheel," "Polk and Dallas," and "Braddock's defeat." As some of her patrons wished all-cotton goods, which would not be attacked by moths, dyed hand-spun cotton is sometimes used to form the pattern, with a warp of white factory-spun cotton, as in other cases. The pattern is more clear-cut in the cotton coverlets than where wool is used, and they are preferred by many purchasers.

The plan of supplying the materials and paying for the work on a piecework basis was adopted. For carding and spinning, the women were paid 33½ cents per pound of wool or 44 cents per pound of cotton; for dyeing, 20 cents per pound of wool or 25 to 30 cents per pound of cotton, the indigo and madder being furnished and various other dye-stuffs being found in the woods; for weaving coverlets of the usual weight, 35 cents a yard; for weaving rugs (a faster process because of the double yarn), 25 cents a yard. These prices were somewhat higher than the customary rate of payment prevailing for coverlets woven for persons residing in the neighborhood, when the price for weaving was from 20 to 25 cents a yard; but the rate of pay has been further increased, especially for weaving, so that a first-class weaver now commands 40 or 45 cents a yard. This has encouraged several young women to learn the craft, two of whom are fitting themselves as teachers.

The cotton coverlets, in strips 37 inches wide, are sold at \$1.50 a yard, the cotton and wool at \$1.75, or in double weight at \$2 a yard. These goods are also made in a 27-inch width, at \$1.25, \$1.50, and \$1.75 a yard, respectively. Linsey (mixed wool and cotton cloth), 36 inches wide, is made for sale at from \$1 to \$1.50 a yard. Bedspreads, embroidered in homespun colored cotton on a handsome cotton foundation, in original designs, are sold at from \$7.50 to \$9 apiece. Knotted fringe for bedspreads, hangings, rugs, etc., is furnished at from 20 cents to \$1 a yard, according to weight. In weaving coverlet material for some purposes, as for table covers, 3 inches of the white warp is left at either end, so that no other fringe is needed. Hangings 36 inches wide, made from silk scraps, are sold for \$1 or \$1.25 a yard.

Women's corn-husk hats, of light weight but durable, are sold for \$1.25. Some of these are made from reddish-brown husks selected from red ears. Melon-shaped mountain baskets of white-oak splints, colored brown or green, are made in three sizes, the largest size holding about half a bushel, and sell for from 60 cents to \$1 each in lots of half a dozen or more. All these prices include carriage.

In November, 1902, Miss Goodrich organized the Cottage Industries Guild of Allanstand, which met once a week during the winter and at monthly intervals during the spring. There are 25 or 30 members, each of whom pays a yearly membership fee of 25 cents in work.

There has been a rapid development of the Allanstand industries since the organization of the guild, the members of which have so much esprit de corps that they are willing to give each other the benefit of their dye secrets, etc. The council of the guild is composed of the best workers in each line. A model log cabin has been built as headquarters for the guild.

The products of the Allanstand Cottage Industries are marked with a tag on which is printed a quill wheel (the wheel used to fill the quills or reels for the shuttle). Exhibitions have been held at Asheville, N. C., and at Holderness, N. H., as well as at Allanstand.

An effort has been made to discourage the use of aniline dyes and to revive the use of the old-time coloring matters. Some experiments have also been undertaken to test the merits of certain commercial dyes which are said to be chemically the same as natural madder and indigo.

A coarse sort of hooked rug is made in the neighborhood, and an effort will be made to develop and improve that industry, as well as the weaving of rag rugs. Some attempt has been made to raise and spin flax, but with less satisfactory results than were obtained with wool and cotton.

THE BERE A FIRESIDE INDUSTRIES.

Soon after Dr. William Goodell Frost went to Berea, Ky., in 1893, as president of Berea College, his attention was attracted to the handsome bed covers woven by his mountain neighbors, and, as opportunity offered, he began to purchase these and other home-woven products. A few years later some of these covers were taken to Louisville, Cincinnati, and New York, where they were much admired, and were in some cases found to be identical in pattern with coverlets woven long ago in New England. When the weavers were asked to execute duplicates, they replied that they would have to raise more sheep first. As explaining the decadence of the industry, it was said that "the gals likes factory and brung-on things." But the constant demand for coverlets at Berea and in the North led to a revival of domestic spinning and weaving, as well as of sheep raising, on mountain farms in Kentucky.

Coverlets began to be brought to the college at the beginning of each term to help pay the school expenses of students. It was found that the recently woven coverlets were inferior to some of the older specimens which had been preserved, in that the patterns failed to "hit in the seam," and also because the less permanent aniline dyes were being used in the place of the original indigo and madder. The college therefore undertook a revival in the quality as well as in the quantity of the work. Beginning in 1896, "homespun fairs" have been held annually at commencement, at which small premiums are awarded for the best coverlets, blankets, linsey, etc., and also, at least in recent years, for the best specimens of other homemade articles, such as chairs, saddles, spinning wheels, ax handles, wooden plates, forks and spoons, and baskets. Thus the handiwork of both sexes is represented. Interested friends have sent contributions to increase the number and size of the premiums. Through the generosity of a cotton manufacturer of Cincinnati, special premiums were offered, at a recent fair, for the best bark dyes. This occurrence is significant, because it shows that manufacturers are still interested in the possibilities of vegetable dyes, though their use in factories has been given up. Another special premium was offered for new border designs; and it is hoped that this marks the beginning of a new period in original designing. These fairs have had a marked influence in improving the quality of the work. They have also given an excellent opportunity for the sale of goods, no commission being charged upon sales made. Besides the exhibits entered in competition for premiums and for sale, old pieces loaned for the purpose are shown for the sake of comparison. The mountaineers come from miles around to attend the commencement exercises, and much interest is taken in these exhibitions of home-made products.

As the college found itself becoming the recognized agency for the marketing of coverlets, etc., it became necessary for some one to assume charge of the business and receive and give out orders in a systematic manner. Miss Josephine A. Robinson, of the college faculty, took up this work in 1899, and in her dealings with the weavers made it a point to discourage the use of aniline dyes, and to secure improved weaving and the matching of the patterns at the seams. In order to revive weaving in mountain cabins where it was no longer practiced, a leaflet was sent out, headed "Repair that loom." One woman was so anxious to obey this injunction that she rode 27 miles on horseback to get a necessary piece of mechanism.

In the spring of 1902 Mrs. Hettie Wright Graham went to Berea to devote herself to the development of the Berea Fireside Industries. She resided and had her office in a log cabin furnished with hickory chairs made in the mountains and polished oak tables made by the woodworking class at the college, and embellished with the products

of mountain looms; and she had a second log cabin for a loom house, where a weaver was employed to teach spinning and weaving to the college girls, and where women living in the village came to weave. There are now as many as 20 women in the village who spin and weave; of these some have their own looms and others have borrowed looms from the college. Besides encouraging the making of blankets, counterpanes, linsey-woolsey, linen table covers, towels of ramie, knotted fringes, etc., Mrs. Graham introduced the weaving of rag rugs in a variety of artistic colors and patterns. Factory-spun linen was found to break badly when woven in hand looms, the fibers having been broken in spinning, so the college now raises its own flax and has it spun by the village women. The wool used at Berea is carded by machinery, but spun by hand. Some of the mountain women also card the wool by hand, thus making a softer yarn than that produced by the carding mills. In the mountain cabins it is not unusual to find a woman, perhaps a dependent relative of the family with whom she lives, paying her board by carding and spinning wool for the mistress of the house to weave.

For the warp of mixed cotton and woolen goods factory-spun cotton is commonly used; but in some cases the cotton is raised at home, put through a hand gin, carded, and spun by hand. After being scoured the cotton warp or chain is sized by dipping in a thin starch made from corn meal. It is then put on the winding blades and spooled, often on corncobs. The spools or cobs of thread are then arranged in a rude spooling frame, the ends of all the threads are gathered together, and the warp is wound from the spools upon the warping bars. The wool for the weft is commonly sheared by the men or boys of the household, or sometimes by the women, who afterwards wash it, perhaps in the nearest brook, and pick out the burrs and trash—so tedious a process that picking 3 or 4 pounds is an average day's work. The white wool is then sent away to a carding mill for the next process, or if there be no mill or railroad within reach some member of the household cards it by rolling it between two hand cards, resembling currycombs. It is then ready for the spinning wheel, from the spindle of which it is reeled into "hanks;" it is then scoured and dipped in the blue pot. The making of indigo dye is a difficult art, even by those who understand it and are fortunate enough to obtain good indigo. After the dye pot is "started," with "yeast" borrowed from a neighbor or with wheat bran, it must be set by the fire and not allowed to become cold. For yellow, brown, and green dyes various native barks and herbs are used, and one Kentucky woman has found a wild plant which serves as a satisfactory substitute for indigo, but she guards her secret jealously.

Arranging the warp in the loom is another tedious process which must be performed before the weaving proper can begin. A small boy or girl of the household is generally utilized to hand the thread ends one by one to the mother, who passes them carefully through the harness according to the draft selected, then through the sley, and fastens them in place. Finally the weaver takes her seat before the loom and throws the shuttles from right to left and from left to right, at the same time "tromping" on the four treadles in turn so as to produce the right pattern.^a)

When Berea College hires spinning and weaving done the prices paid are 25 cents per dozen "cuts" for spinning, 10 cents a yard for plain weaving, as in the case of linsey-woolsey, and 20 cents a yard for weaving linen and ramie fabrics. In the case of coverlets and rugs woven at a distance from the village, the products are bought outright, on behalf of the college, and sold to purchasers at a very slight advance to cover expenses. This plan enables the weavers to receive cash for their work as fast as it is finished, and permits the rejection of inferior work. One mountain woman sends to Berea the goods spun and woven for her by several of her neighbors, paying them in corn and other products of her farm. For many of the mountain families the spinning wheel and loom are the principal sources of cash income, and suffice to pay the moderate expenses of the children at Berea College.

In order to have sufficient material for rag rugs, scraps of ticking are obtained from a Cincinnati manufacturer and sold to the rug weavers at 3 cents a pound, to be paid for when the rugs are sold. The Berea rag rugs are sold for about \$1 a square yard. The prices for coverlets vary according to the quality of the weaving, as well as according to size. The purchasers are expected to pay express charges.

Owing to ill health Mrs. Graham has been obliged to give up the active management of the industries and the work is now carried on by Mrs. Jennie Lester Hill under Mrs. Graham's advice and suggestion.

The Berea Fireside Industries have grown until the sales now amount to about \$1,500 a year. Berea coverlets won a medal at the Paris Exposition.

Skill in weaving is rarely found among the Negroes, but when President Frost went to Berea he found wealthy planters in the neighborhood wearing homespun which they had hired woven by some of their former slaves. He has followed their example by having homespun suits made for his own use.

^a Mrs. Jennie Lester Hill, teacher of domestic art in Berea College, has described the "Fireside industries in the Kentucky mountains" in *The Southern Workman* for April, 1903. The Berea College Quarterly reports the progress of the work from the college standpoint.

RUSSELLVILLE, TENN.

Mr. and Mrs. T. L. Bayne are reviving the arts of indigo dyeing and coverlet weaving in the vicinity of Russellville, Tenn., not far from the mountains. While making their summer home there a few years ago they became interested in the coverlets found in the neighborhood, and have made a collection of about thirty drafts, one of which is 125 years old. Some of the patterns are named "Young lady's perplexity," "Missouri trouble," "Isaac's choice," "Rose in garden," "Wreaths and roses," "Sixteen-wheel chariot," "Snail trail," "Battle of Richmond," "Snowball," "Soldier's return," "Rocky Mountain beauty," "Winding blades and folding windows." Mrs. Bayne has adapted the coverlet weaving to a variety of uses, making baby blankets, sofa-pillow covers, table covers, etc. In table covers silkoline is used instead of woolen yarn to form the pattern. She has found it difficult to procure homespun yarn, and believing it to be no better than the factory product, she buys her woolen as well as her cotton yarn. Vegetable dyes are used for the woolen yarn, though copperas has been found satisfactory for cotton. She has learned the difficult art of indigo dyeing, having started her blue pot from one in the neighborhood which had been in use since 1797.

In addition to coverlet weaving, both Mr. and Mrs. Bayne weave rag rugs and table covers, etc., in some cases utilizing cigar ribbons in place of rags. Mr. Bayne is also experimenting with hooked rugs with the hope of introducing that craft among his neighbors. Two women, a mother and daughter, are employed to assist in the weaving, and rags are sent out to be dyed. The coverlets are sometimes woven "one for t'other," according to the custom prevailing in the neighborhood—that is, the patron provides the materials for two coverlets, of which the weaver returns one and keeps the other.

The old customary cash prices for weaving were 8½ cents a yard for rag carpets and 25 cents a yard for coverlets, besides 50 cents for preparing and putting in the warp, but Mrs. Bayne pays a little more than the old prices. The price for tacking or sewing together rags for carpet material is 5 cents a pound, or the tacked rags may be bought outright for 7 cents a pound.

Miss Cassie Rogan, also of Russellville, is making an effort to revive the making of patchwork and appliqué quilts, making the colored patterns herself, but hiring the quilting proper done at the old-time price of \$1 for each spool of thread used. This quilting, in the elaborate designs of a century ago, was so nearly a lost art that the only person who could be found possessing the requisite skill was a woman 85 years of age. A number of old quilts have been collected, named, like the coverlets, according to their patterns, as "Washington's plume,"

"Peony," "Dogwood," "Double Irish chain," "Desert leaf," "Love at the window," and "Ocean wave."

THE HULL HOUSE LABOR MUSEUM.

A labor museum was opened at Hull House, Chicago, in November, 1900, for the purpose of exhibiting industrial processes in various stages of their evolution, and thus offering a sort of education in industrial history in the form in which it would be most easily comprehended, and at the same time emphasizing the dignity and importance of labor.

The textile department has from the first been the most fully equipped and historically complete part of the museum. Hull House is located in a district inhabited by foreigners of many nationalities. Among the older women are many who were accustomed in their native lands to spin and weave the clothing for their families, and some of these brought with them to America their distaffs and spinning wheels. Much of the equipment of the museum was therefore collected in the neighborhood. On Saturday evenings women of various nationalities carry on in the museum the processes to which they were accustomed in their European homes. The primitive hand spindle, as used before the introduction of spinning wheels, is employed in somewhat different forms by Italians, Greeks, Russians, and Syrians. Various kinds of spinning wheels and reels are also shown in operation. Wool, cotton, flax, and silk are put through one process after another, from scouring, dyeing, and combing to weaving. The dye room is equipped with porcelain tubs, but the dyes used are of vegetable origin. The museum has a primitive Navajo loom, a stocking loom, a Swedish pattern loom, and fly-shuttle, Jacquard, and power looms, the latter operated by electricity. The labor museum is not merely a museum, it is also a workshop. In addition to the Saturday evening exhibitions, a number of Irish and Italian women use the spinning wheels and looms during the week as their other duties permit, receiving 15 cents an hour for their labor. They produce a considerable quantity of woolen and linen fabrics and rag rugs, which are offered for sale by Hull House at the museum and at various arts and crafts exhibitions. Some of the linen fabrics are used as the background for elaborate embroidery. Classes in needlework, hammock weaving, and basket making are held in the textile room of the museum.^a)

PROCTOR, KY.

The Church Mission Settlement, at Proctor, Ky., is a center for the social and educational work of the Protestant Episcopal Church among

^a A profusely illustrated article on the labor museum was published in *The Com-*
(Chicago), for May, 1902.

the Lee County mountaineers, at which special attention is given to the industrial training of boys and girls. During the summer months there are classes in cooking, sewing, basketry, and carpentry, and usually a kindergarten for the younger children. A loom has been set up at the Mission House, and an effort has been made to induce the mountain women to keep up their spinning and weaving and teach their skill to the younger generation. A good many women in that vicinity still do plain weaving, making jeans, linsey, blankets, and towels. A few women have been found who can weave "kiverlids," and last year one of these who is unusually skillful taught a Mission House class in weaving. Mrs. Daniel, a resident at the Mission House, now makes excellent coverlets which sell ordinarily for \$6 apiece. The extension of the industry has been slow because of the limited number of sheep now kept in that region; but the prospect of cash sales is exciting a new interest in the industry. There is a carding mill at Booneville, 16 miles from Proctor, but the coverlet weavers consider hand-carded yarn better for their purpose. Real indigo, madder, logwood, and other vegetable dyes are used.

The basketry class, which was started at the Settlement by Miss Bessie Daingerfield and has been kept up by other teachers, now includes adult women, as well as girls, and some of its members are making artistic and durable baskets which sell at good prices.

HINDMAN, KY.

Miss Katherine R. Pettit and Miss May Stone, with the support of the Woman's Christian Temperance Union of Kentucky, have established the Log Cabin Settlement at Hindman, Knott County, Ky., 45 miles from a railroad. Even in this isolated region weaving was evidently dying out, but was still practiced by some of the older women. The Settlement workers foster the industry in various ways. They buy the coverlets, or sell them for the makers without commission, and they encourage the use of vegetable dyes by refusing to take articles in which aniline dyes have been used. At the Settlement, which occupies an 18-room log cabin, a century-old loom has been set up, and both plain fabrics and coverlets are made in the old-fashioned way, beginning with the shearing of sheep raised near by and the carding of their wool. Orders are received for coverlets, linsey-woolsey, and other homespun cloth, and for the melon-shaped mountain baskets. Weaving, basket-making, and other crafts are taught in the industrial classes conducted by the Settlement workers.

GEORGIA.

Mrs. J. Lindsay Johnson, of Rome, Ga., has long been interested in the encouragement of weaving among the women residing in the near-by mountains; but her efforts have met with apathy. Some cov-

erlets have been produced, however, and silk-rag portières and rag rugs have also been woven. Some of the weavers have been induced to weave publicly at the interstate fairs held at Atlanta. The products are sold chiefly through the arts and crafts committee of the Georgia Federation of Women's Clubs. The later efforts of this committee have been directed largely toward the introduction of weaving and other handicrafts in the schools of the State, especially in the State Normal School and in the model day schools which have been established in mountain districts through the Federation's initiative. Corn-husk hats, palmetto hats, and baskets are among the marketable products of these schools sold by the committee.

ABNÁKEE RUGS.

A rug-making industry of considerable importance has been created in the mountains round about Pequaket, Carroll County, N. H., through the efforts of Mrs. Helen R. Albee, a designer, who first made her summer home at Pequaket several years ago, and now lives there the year round. The rug making grew out of a conviction of the importance of giving some congenial and remunerative employment to country people as a means of stemming the tide of migration to the cities. In selecting an industry suited to the rural districts, Mrs. Albee chose the making of hooked rugs. Such rugs were already being made from time to time in the farmhouses of New England and other sections, from old clothing and odds and ends of cloth. It was found that some of the rugs had been in use for more than thirty years, so that there was no question of their durability; but it seemed that they were needlessly ugly, and that there was room for improvement in both the designs and the coloring. Simple, conventional designs were therefore drawn, the motifs adapted chiefly from native Indian sources, to take the place of the stamped patterns for sale in the country stores, which represented domestic animals, flowers, scrolls, etc. The country people did not at first approve the new designs, and were skeptical of being able to sell hooked rugs in any pattern; but their apathy was overcome when a number of rugs had been made and it was demonstrated that they were marketable. The making of rugs with the new designs involved learning the process of rug hooking, testing different materials in order to produce the desired velvety texture, the gathering of various barks, lichens, etc., for dyestuffs, and long-continued experiments in dyeing. When about half a dozen rugs had been made, and one young woman in the neighborhood had been induced to make as many more, an exhibition was held in the village hall. The rugs were so well appreciated by the summer residents that all those offered for sale were sold, and numerous orders

were received for duplicates, with the result that workers soon offered themselves in sufficient numbers to establish the industry on a larger scale.

Although she had hoped that the workers would soon be able to work independently, Mrs. Albee has found it necessary to assume and retain full control of the industry. She not only designs the patterns and cuts out stencils for marking them on the burlap which is used as the foundation of the rugs, but also buys and dyes the flannel to be used for the filling, trains the workers, pays them for their work as it is finished, arranges for exhibits, takes orders, and markets the product. Even under these conditions she has found it difficult to obtain work of a uniform quality from all. The workers are paid by the square foot, the rate varying with the intricacy of the pattern. It is intended that a skillful woman should be able to earn \$1.50 for a full day's work, and it has been found that besides attending to their housework several women make as much as \$1 a day each. During the past five or six years Mrs. Albee has trained about thirty women living within a radius of 6 miles from Pequaket, but only half of these attained proficiency, and some of the skillful ones have moved away. A few of the workers can be relied upon to carry out the most elaborate patterns.

The burlap being stretched on a wooden frame, strips of flannel about a quarter of an inch wide are drawn through the meshes with a hook, so that the loops form a close pile three-eighths of an inch high. After the hooking is completed the surface of the rug is clipped with a pair of long shears, to produce an even surface. Only the higher loops are cut; the uncut loops give firmness to the whole, while the ends of the cut pile fray a little and produce a soft velvety surface. When the rug is finished the edges of the jute burlap foundation are turned under and sewn down on the under side. To the bottom of each rug is sewn a silk label bearing the words, "The Abnakee Rug," together with the totem of one of the chiefs of the Abnaki Indians, whose tribal name, spelled phonetically, has been adopted to identify the rugs with the region in which they are made.

After trying many different materials for the cloth strips, Mrs. Albee has settled upon the use of all-wool unbleached flannel twill of a uniform grade and weight, which is ordered directly from the mills in order to get it before it has been sulphur-bleached or hot-pressed, as the bleaching and pressing interfere with the action of the dye. The use of vegetable dyes has been given up, because of the difficulty of getting and using them, and because they gave only a narrow range of colors; instead, aniline dyes of a good quality are used, which are bought in quantities and are mixed according to formulæ worked out in the course of experiments, in order to obtain the dull tones found in

oriental rugs. She offers the benefit of her experiments to anyone who may wish to establish a similar industry elsewhere or engage in rug making individually, by selling both flannel and dyes such as she uses, which otherwise could probably not be obtained at retail, and also a little book giving minute directions for making hooked rugs and mixing the dyes.^a This manual, and the exhibits of Abnákee rugs which have been sent as far west as the Pacific coast, have awakened a widespread interest in the industry and led to similar efforts in various places.

Abnákee rugs have been made in Egyptian, Persian, and Mexican designs, and with Japanese cross stripes, as well as in the patterns adapted from Indian sources. They are sometimes made in colors to match the furnishings of particular rooms. They are made not only for floor coverings, but also in more elaborate designs, including heraldic devices and jeweled effects, for wall hangings, or for chair, cushion, and couch covers. The prices range, as a rule, from \$1 to \$1.25 a square foot, according to the intricacy of the designs. The usual price for simple Indian designs is \$1.15 a square foot.

SABATOS RUGS.

Mr. and Mrs. Douglas Volk, of New York City, have done much toward reviving several old-time handicrafts at Center Lovell, Oxford County, Me., 16 miles from the railroad by stage, where they make their summer home.

In the summer of 1900 Mrs. Volk began experimenting with a view to improving the New England hooked rug. Instead of rag strips she used native wool homespun yarn, and the designs were adapted from Indian handicrafts. Her first rug was taken to New York and shown to a group of artists; and it was received with such favor that the maker soon received a number of orders. She turned to her neighbors for help, and has enlisted the aid of about a dozen women, the wives of thrifty and fairly well-to-do farmers near Center Lovell. The number of workers has increased from time to time. A neighboring mountain, Mount Sabatos, gives its Indian name to the product.

Mrs. Volk's first rug was made on a foundation of the best imported burlap, but thereafter burlap was rejected as being less durable than the yarn pile and because it was desired that the rugs should be the product of hand work throughout. Various hand-woven foundations were tried, and the material finally adopted is an all-wool, hand-woven, homespun webbing. Thus the rugs are wholly the product of local industry, and sheep raising by the farmers in that vicinity has been

^a Abnákee Rugs: A Manual Describing the Abnákee Industry, the Methods Used, with Instructions for Dyeing. By Helen R. Albee. Cambridge, printed at Riverside Press, 1901.

materially stimulated. Most of the wool is carded at an old water-power carding mill at Waterford, near Center Lovell, but the other processes are carried on by hand. The dyes used are from vegetable sources. It is stated that almost any dye will fade more or less in the course of time, but that these vegetable dyes, if they change at all, will still retain much of their original color and remain harmonious in tone, while commercial dyes, though much easier to use, change into shades quite different from the original color and less pleasant to the eye. Especial importance is attached to the use of old vat indigo blue, one of the predominating colors in the Sabatos rugs and one of the most difficult colors to obtain, but practically fadeless. A few persons near Center Lovell still preserve the difficult art of indigo dyeing.

The loom and the processes of arranging the warp and weaving are similar to those employed in the southern mountains, but hand-spun woolen yarn is used for both warp and weft, and no pattern is woven into the webbing. As in oriental rugs, a few inches of the warp are left at each end for fringe. No stencils are used in putting in the designs. If the worker is not skillful enough to work from a drawing, the design is drawn on the webbing in free-hand, lest it should look too much like a pattern in factory-made oilcloth or wall paper.

When the designs are drawn and the yarn filling dyed the materials are given out to the workers, some of whom live as much as 6 miles away. After the webbing is fastened to a frame the short pieces of yarn filling are drawn through and separately knotted, as in oriental pile rugs, but with a knot invented for the purpose by Mrs. Volk. This knotting of the yarn increases the durability of the rug, but also renders the rug making very slow and laborious work. Before the introduction of the knot the workers received about 35 cents per square foot, but they are now paid \$1 a square foot for plain work and \$1.50 for figured work. With the time at their command it takes two months to finish a small rug. A Sabatos rug measuring 3 by 5 or 3 by 6 feet will sell for \$50 or \$60, or rather more than \$3 a square foot. Mrs. Volk has been advised by connoisseurs to raise her prices. At the present rate she has more orders than she can fill, and there is a long waiting list.

The webbing used as the foundation of the rugs is woven at the Volk cottage by members of the family, assisted by women who come to work by the day. Here are woven other fabrics also, especially one of mixed linen and wool which may be used for portières, table covers, etc., but is especially effective in window hangings. An attempt is being made to have flax raised near at hand, so that the linen as well as the wool may be hand-spun. Silk has also been used for warp, with woolen weft, in table covers, etc.

Exhibitions have been held at the village hall in Center Lovell,

showing the rugs at every stage from the raw wool to the finished product. Other handmade articles were also exhibited. At one of these the exhibits were divided into three classes. The first class consisted of articles handmade of materials prepared by hand, as the Sabatos rug; the second consisted of articles handworked from materials prepared partly by machinery, as rugs made on burlap with rags dyed in vegetable colors; while the third included rugs composed of machine-made materials and dyed with aniline dyes. The people of Center Lovell showed a marked preference for articles in the first and second classes, and almost nothing in the third class was sold. A high standard of excellence is now required for admission to the exhibitions. The local craftsmen have been organized into the Center Lovell Handicraft Society.

Mr. and Mrs. Volk are willing to give the benefit of their experience to others who may desire to establish a similar rug industry elsewhere under favorable conditions, but they will not encourage the use of factory-made webbing or filling nor of commercial dyes.^(a)

CRANBERRY ISLAND RUGS.

Of the various rug-making industries which have grown out of Mrs. Albee's pioneer efforts in New Hampshire, perhaps the most important is that established among the wives of fishermen on the Cranberry Isles, opposite Northeast Harbor, Me. Until the rug industry was introduced there these women, though intelligent and sufficiently well provided with the necessities of life, had little to occupy their time during the winter and but little ready money. They were ambitious to raise money for church purposes and for building a wharf, etc., and when they heard of the success of the Abnakee rug industry a number of them were desirous of undertaking similar work. They were already familiar with the process of hooking rugs; and they were fortunate in having the benefit of the initiative, moral support, and financial backing of Mrs. Seth Low, Miss Miriam P. Reynolds, and one or two other New York women whose summer homes are at Northeast Harbor, as well as in obtaining the aid of capable designers. The industry was started on a small scale in the autumn of 1901, under the supervision of Miss Amy Mali Hicks, a designer identified with the arts and crafts movement in New York City, who designed the patterns and gave instruction in dyeing, etc. A year later Miss Hicks retired from the management of the enterprise and was succeeded by Miss Una A. Clarke, of Cambridge, Mass., who is also a designer and had had some experience in making rugs. During the first winter six rugs were made which were exhibited the following summer at North-

^a A pamphlet describing the Sabatos rug and the processes by which it is made has been printed at the Sabatos Press by Wendell Volk.

east Harbor. The next winter the industry was developed on a somewhat larger scale, twelve women working on the rugs as regularly as their household duties allowed, averaging about two hours a day. In the summer comparatively little work is done. One woman stencils all the burlaps, while another dyes all the flannel. The dyestuffs are obtained from Mrs. Albee, and are identical with those used in the Abnakee rugs; but a somewhat firmer texture is obtained in the Cranberry Island rugs by using 2 yards of flannel to the square foot, instead of $1\frac{1}{4}$ or $1\frac{1}{2}$, as at Pequaket. The use of vegetable dyes is now under consideration.

The Cranberry Island rugs are distinguished by the monograin "CR" worked in one corner or on the selvage at the back. Several designs have been used, with different arrangements of colors, and from time to time new patterns are prepared. Most of the designs are original and striking, effective use being made of a somewhat conventionalized pine tree and other natural forms; but the patterns of old-time samplers have also been adapted for use in bedroom rugs. The rugs have been sold about as fast as they could be made, in most cases being made to order. They are used chiefly in summer cottages in Maine and in the vicinity of New York. An exhibit was sent to a New York City arts and crafts exhibition in the spring of 1903, and all the rugs sent were sold. The industry is now firmly established on a self-supporting basis, but the committee of New York women still maintains an organization, Mrs. Charles Wesson having succeeded Mrs. Low as treasurer.

The stenciler receives 25 cents for each rug, and the dyer 6 cents per yard of material. The women who draw the flannel strips through the burlap receive 40 cents for each square foot, which is about three hours' work. The rugs are sold at \$1.20 per square foot, of which 60 cents represents the cost of materials. This leaves a margin of a few cents a square foot, which is used for a sinking fund and to pay for the designing, etc. Most of the rugs made thus far have been small ones, selling for from \$7 to \$32 and averaging about \$10 apiece, but orders have been received for at least two large rugs at \$100 each. The small size of the fishermen's houses makes it difficult for the women to handle the larger rugs.

SUBBEKASHE RUGS.

The Subbekashe rug industry was started at Belchertown, Mass., in 1902, by Miss Lucy D. Thomson, "as a personal experiment in meeting the problems of a New England country town whose industries are matters of the past and where the changed conditions of farm life have left the women spare time, with few interests and no lucrative

employment to occupy it." A large number of women have been found who are anxious for work and can afford to work during their spare time for a small return. Not more than seven women have yet been employed at any time, but there is a large waiting list of others who need work.

The Subbekashe rugs are hooked or drawn woolen rugs similar to those made at Pequaket. Miss Thomson designs the patterns, using for the most part American Indian motifs, and supervises the dyeing.

The compensation of the workers is based upon the calculation that an expert worker should earn from \$1 to \$1.50 in a full day's work, and varies from 35 to 60 cents per square foot, according to the design. Only two of the women have attained any marked degree of proficiency, and they are able to make about \$2 a week in the spare time at their disposal. The selling prices range from \$.90 to \$1.15 a square foot. One of the Belchertown rug makers has been provided with a loom and is now weaving cotton rugs.

THE "MOTHERS AND DAUGHTERS' INDUSTRY."

The Woman's Club of Plainfield, N. H., among other expedients for raising money for a club-house, initiated a rug industry in the winter and spring of 1902. Rags were accumulated and sewn together during the winter, and were then woven according to color designs by Mrs. Frances Houston, of Boston, and Mrs. H. O. Walker, of New York, president of the club. Twenty rugs were made, and at an exhibition held in August all of these were sold and orders taken for forty more. A separate organization was now formed with the name "Mothers and Daughters' Industry," with Mrs. G. S. Ruggles as manager, and a trademark was adopted consisting of a distaff and the letters "M D I" in the corner. Instead of using old cloth for rags, white outing flannel is now bought and dyed the desired colors. Many of the rugs have white centers with dashes of color, and borders at each end in stripes or mottled effects. Orders are taken by city members of the club who have taken rugs home with them, and exhibits have been sent to various arts and crafts exhibitions. The number of rugs made in a year now runs into hundreds and the number of yards of material used into thousands. Six looms are in operation, and altogether there are more than twenty-five workers, the weaving of curtains, bedspreads, etc., having been added to the industry. For a rag of the size most often woven, 3 by 6 feet, the price is \$5 or \$6.

INSTITUTIONAL RUG MAKING IN NEW YORK CITY.

At the workrooms for unskilled women maintained by the *Charity Organization Society* of New York City, at 516 West Twenty-eighth

street, part of the women who apply for work from day to day are employed in sewing together strips of cloth to be woven into carpets and rugs. As there is no space for a loom at the workrooms, the material is sent out to two or three different weavers, one of whom weaves rugs 3 or even 4 yards wide. The material used is chiefly new denim, which is purchased by the bolt, but rugs are made also from pieces of gingham, linen, outing flannel, velvet, etc., and silk scraps are made into portières. Orders are taken at the main office of the society, and a rug sale has been held at the house of a member of the committee in charge of the workrooms. The usual prices are from 75 cents a square yard for rag carpet to \$1.50 a square yard for denim rugs, but an extra charge is made for rugs woven to order to match other furnishings. A velvet rug 3 by 6 feet in size is sold for \$6. This rug industry was established about seven years ago, and has grown until the sales reach between \$400 and \$500 a year.

Besides the woven rugs a hooked rug has been made and exhibited under the name "Lapmatta," meaning "little pieces;" but among the women applying for work it is rare to find one skillful and permanent enough for this kind of work.

At the workrooms of the Brooklyn Bureau of Charities, also, women are given work at sewing carpet rags, and here the weaving is done on a hand loom by a man employed for that purpose. Persons furnishing their own materials may have them cut, sewed, and woven into carpets or rugs at from 35 to 50 cents per square yard.

In the "hospital," or old people's home, maintained in connection with the settlement work of Grace Church, a hooked-rug industry has been established to utilize a portion of the time of some of the inmates, largely for the sake of helping them to pass it in pleasant and easy employment. The work is in charge of Mrs. F. E. Morand, the house mother, who designs the rugs and supervises their making by three men over 60 years of age. The rugs are made of woolen yarn, on a foundation of strong imported linen canvas with open meshes. The yarn is cut up into short pieces of uniform length, which are then hooked through the canvas in such a way that each one is tied in a simple knot as it is pulled through. The result is a very thick rug somewhat similar to the Sabatos rug in texture, but with patterns more like those of oriental rugs. They are sold for about \$1.40 a square foot, and the proceeds, after paying for the materials, are devoted to charitable uses. The sales of rugs, together with the patchwork and embroidery executed by women inmates, amount to nearly \$400 a year.

At Richmond Hill House (formerly the West Side Branch of the University Settlement), at 28 MacDougal street, a hooked-rug industry is being introduced for the purpose of giving employment to the

Italian women of the neighborhood. By opening a workroom where these women may come and work by the hour as their household duties permit, it is hoped to provide a convenient substitute for the making of artificial flowers, with its attendant evils of overcrowded rooms and child labor, in which they engage at their homes. Two young women residents have taken charge of this work, with some assistance from a member of the Guild of Arts and Crafts. The materials used in their experiments are of the same kind as those used by Mrs. Albee, but when the industry is fairly established it is the intention to use vegetable dyes.

Richmond Hill House is also reviving flax spinning among the women of the neighborhood, giving out the raw material and paying the spinners 50 or 60 cents a pound for the thread, or higher prices for exceptionally good work. The thread is sent to Miss Mary R. Cabot, of Brattleboro, Vt., who has it woven, together with that spun by Swedish women in her own neighborhood, and sells the finished linen for embroidery and clothing at \$1.25 a yard and upward.

RUG MAKING IN VARIOUS PLACES.

Rug making is one of several handicrafts recently revived at Deerfield, Mass., where an organization has been formed under the name of the Deerfield Rug Makers.

Mrs. Candace Wheeler has established something of a rug-weaving industry in the Catskills, in the vicinity of Onteora, near Tannersville, N. Y., where she spends her summers. Several of the country women have been encouraged to make rugs, but one of the best workers has moved away, while of those who remain only two weave continuously, and they are not anxious to encourage competition by teaching others.

Blue and white "willow-tree" rugs are woven from hand-spun woolen yarn at the summer school of art held annually at Ipswich, Mass.

The Ladies' Aid Society of Isle Lamotte, Vt., has made a number of rugs designed by Mrs. N. W. Fisk.

"Pilgrim" rugs are woven at Pittsfield, Mass., from cotton strips prepared by the women of the Pilgrim Memorial Church of that place; and the proceeds of the sales are turned into the church treasury. The rugs are woven in various combinations of white or black with colors, and are made for hangings, couch covers, and table covers, as well as for floor coverings.

There are still some survivals of old-time handicrafts on the islands along the Maine coast, where many fancy coverlets and all-wool fabrics were woven many years ago. Mrs. F. F. Johnson, of Reach, Deer Isle, Maine, weaves several hundred yards of rag carpeting a year

for the people of the island who save their rags, and for summer visitors. A sewing society of Stonington, being desirous of making some money to keep the church in repair, has recently employed her to weave rugs, which the society sells through the Women's Educational and Industrial Union of Boston, at \$2 each.

Mrs. Mary McM. Kingery, of Crawfordsville, Ind., began making hooked rugs in 1902, at the suggestion of Mrs. Albee. She now employs two other workers, and has shown her rugs at some of the arts and crafts exhibitions. They are called the Ouia rugs, from the name of an Indiana tribe of Indians.

Miss Mercy Brett, librarian at the National Military Home at Dayton, Ohio, and Mrs. I. M. Patrick, also of the Home, are experimenting with hooked rugs, following Mrs. Albee's directions for the most part, but trying yarn as well as cloth strips and using vegetable dyes. Their intention is to design rugs to be executed by women employed for the purpose. Miss Brett has spent the past year in the Philippines, and has experimented with the dyes used by the natives.

At the Bethel Settlement, Minneapolis, rag rugs, heavy woolen rugs, and baby blankets have been woven by Scandinavian women. Their primitive looms are similar to those used by the Navajo Indians, and consist of little more than a rectangular frame with a heddle. Much interest was taken in the work, and the settlement now hopes to secure a colonial loom upon which the women of the neighborhood may weave.

The Roycroft Shop, at East Aurora, N. Y., advertises among its other wares rag carpets and rugs which are woven by women of the village and vicinity.

Among the many individuals who have taken up the weaving of artistic rugs as a handicraft may be mentioned Mrs. Ross Turner, of Salem, Mass., who weaves at her summer home at Wilton, N. H.; Mrs. Abbie S. Nickerson, of Newburyport, Mass., who makes hand-spun, home-dyed "colonial" rugs; Mrs. D. D. Judd, of Oakland, Vt., maker of "Green Mountain" rugs; Miss Ella C. Frost, of Reading, Mass.; Miss Marie Little, of Hurricane, Essex County, N. Y.; Mrs. Amalie Busck Deady, of New York City; Mrs. Melissa Childs and Mrs. Mary Childs, of Chicago. At Eaton, Ohio, rag carpets and rugs in plain colors, stripes, and plaids or "block work" are woven by Miss Jennie Truax and by Mr. and Mrs. Ben F. Cook. Miss Truax also weaves sofa-pillow covers. Mrs. Alfred Wilkinson, of the same place, knits rag rugs as much as three-fourths of a yard wide, using long wooden knitting needles. This manner of utilizing rags, like the making of old-fashioned braided rugs, was formerly practiced in various parts of the country, but is now comparatively rare.

WEAVING IN SCHOOLS AND COLLEGES.

Weaving on hand looms has been introduced into the curricula of various industrial schools and other educational institutions. Thus at Hampton Institute, Hampton, Va., there are two looms in constant use, a large one for carpets and rugs and a smaller one, built by the boys in the trade school from drawings of North Carolina mountain looms, for table covers, portières, etc. A course in dyeing from vegetables dyes has also been given. A class in weaving has been formed at Teachers' College, New York City, under the instruction of Mr. Wendell Volk. At Newcomb College, New Orleans, a beginning has been made in rug weaving. At the Home Industrial School at Asheville, N. C., hand-woven fabrics have been collected and a loom set up with the intention of giving regular instruction in weaving as soon as a teacher can be found who combines skill in weaving with the requisite teaching ability. Some weaving has already been done at this school, but only on a small scale.

Weaving is now being taught to some extent even in elementary schools. At the Dewey School in Chicago textile handicrafts are taught in connection with the history of civilization. The pupils themselves have constructed primitive looms and a small colonial loom, while the building in which the textile department is housed was built by the older pupils.

Mrs. Mattie Phipps Todd, a teacher in the Motley School, Minneapolis, has invented a simple weaving frame for elementary instruction which is used in the schools of Minneapolis and several other cities, and upon which the children are taught to weave the furnishings of their doll houses and some small articles of wearing apparel.

CONCLUSION.

The revival of domestic weaving and rug making is of economic importance chiefly as a means of providing employment for persons living in rural districts and having little else to occupy their time and interest during the winter months, and also for city men and women who are incapable of supporting themselves at more difficult occupations. From a social standpoint it is worthy of note that the industry is the means of bringing together in a natural way the permanent residents and the summer visitors in rural neighborhoods, with the result that mutual respect born of a common interest often takes the place of a suspicious or even hostile class feeling.

There is a constant and apparently increasing demand for hand-woven fabrics, notwithstanding their expensiveness as compared with factory-made goods. Aside from the popularity of old-fashioned blue-and-white coverlets for decorative purposes, handmade linsey-woolsey and cottonades are coming into vogue for outing and golf

skirts, and even to some extent for men's clothing, and there is also a growing demand for hand-woven linen and other cloth to serve as the background for art embroidery, etc.

The making of hooked rugs for the city market, as introduced in New England by Mrs. Albee and Mrs. Volk, is still in its infancy, but seems destined to become an important industry. These rugs are much superior in durability and beauty to woven rag rugs, as well as to many grades of factory-made carpeting, and they are comparable to oriental rugs of good quality. Some purchasers, indeed, prefer them to oriental rugs, because of their novelty and the distinctively American character of the designs, and they are used in city drawing rooms as well as in summer cottages. There seems to be no good reason why a considerable part of the American demand for high-class floor coverings should not in time be supplied by American handicraft.

II. THE ARTS AND CRAFTS MOVEMENT.

The revival of domestic weaving and rug making, some account of which has been given, is only one phase of a widespread revival of handicraft which is commonly spoken of as "the arts and crafts movement." This movement, which is commonly traced to an English source in the influence of John Ruskin and William Morris, has a sociological or industrial as well as an artistic aspect; it is in part a protest against the conditions of modern factory production, with its minute division of labor and mechanical processes, and the expression of a desire for conditions of production such that the producers may take pleasure in their work and such as are more favorable to the development of their faculties. William Morris defined the movement as an attempt to change the system of the production of wares. He said: "To give people pleasure in the things they must perforce use, that is one great office of decoration; to give people pleasure in the things they must perforce make, that is the other use of it." Craftsmanship implies not only thoroughly good workmanship, but a positive interest and satisfaction in the work on the part of the worker. Advocates of handicraft consider it desirable that workers should, as far as possible, exercise the faculty of design in connection with manual labor, and so impress their individuality upon their products.

Aside from the efforts of individual craftsmen in their homes or in private studios or workshops, the arts and crafts movement in America has manifested itself in several kinds of organized efforts, which are more properly the subject-matter of this paper. There has been, in the first place, a rapid organization of arts and crafts societies in the cities, bringing together at meetings and exhibitions the craftsmen in various lines and specimens of their work. From the *list of these organizations which hold annual arts and*

exhibitions,^(a) a number of societies are here selected for special mention because of their continuous activity in the maintenance of permanent exhibits or workshops, or because of other interesting features. Again, the movement has extended to rural communities; arts and crafts societies have been organized even in small villages, and the products of domestic industry are exhibited and sold both at local exhibitions and in the larger exhibitions held in the cities. Finally, in several cases little groups of craftsmen from the cities have formed themselves into corporations or otherwise associated themselves

^a Mr. Frederic Allen Whiting, secretary of the Boston Society of Arts and Crafts, has compiled the following list of active arts and crafts societies:

Chicago Arts and Crafts Society, Miss E. R. Waite, secretary, 1301 Woman's Temple, Chicago.

Society of Arts and Crafts, 9 Park street, Boston, Mass., Mr. Frederic A. Whiting, secretary.

Arts and Crafts Society, Deerfield, Mass., Miss Julia P. Brown, secretary.

Hingham Society of Arts and Crafts, Hingham, Mass., Miss Susan B. Willard, secretary.

Greenfield Arts and Crafts Society, Greenfield, Mass., Miss Lena S. Stratton, secretary.

New Clairvaux Arts and Crafts Society, Montague, Mass., Mrs. Ada Ross, secretary.

Guild of Arts and Crafts, 109 East Twenty-third street, New York, Miss Amy Mali Hicks, secretary.

Society of Arts and Crafts, 323 North Charles street, Baltimore, Md., Miss M. Louisa Stenart, secretary.

Malden Arts and Crafts Society, Malden, Mass., Mrs. Curtis S. Pease, secretary, 40 Murray Hill Road.

Brewster Guild of Arts and Crafts, Brewster, Mass., Miss Mary White, secretary.

Southampton Arts and Crafts, Southampton, Mass., Mrs. C. P. Gridley, secretary.

Dorchester Arts and Crafts Society, Dorchester, Mass., Miss M. G. Dewick, secretary, 19 Mather street.

Society of Arts and Crafts, Grand Rapids, Mich., Miss Florence Ellis, corresponding secretary, 156 South Division street.

Arts and Crafts Club of St. Louis, Mo., Mr. B. B. Brown, secretary, 33 Linmar Building.

Arts and Crafts Society, Dayton, Ohio, Mrs. George Wuichet, 500 E. Second street.

Center Lovell Handicraft Society, Center Lovell, Me., Mr. Earnest Hatch, secretary.

Arts and Crafts Society, Minneapolis, Minn., Miss Mary E. Simpson, secretary, 1521 Laurel avenue.

Arts and Crafts Club, Fargo, N. Dak., Mr. Erle Burche, secretary.

Arts and Crafts Club, Hartford, Conn., Cora Greenwood, secretary, 105 Trumbull street.

Arts and Crafts Club of Bradley Polytechnic Institute, Peoria, Ill., Irene O. Bunch, secretary.

Society of Arts and Crafts, Exeter, N. H., Mrs. Alice M. Batchelder, chairman, 328 New Market road.

Arts and Crafts Society of St. Joseph, Mo., Francis E. Kirkpatrick, secretary.

Guild of Arts and Crafts of California, Miss Clara Rice, secretary, 639 Kearny street, San Francisco.

Arts and Crafts Association, Fitchburg, Mass.

Hamilton Arts and Crafts Club, Hamilton, N. Y.

together for the purpose of living and working in the country, thus avoiding in part the high pressure of city life and combining congenial association with the other advantages of country life.

CINCINNATI, OHIO.

A quarter of a century ago, at about the time of the Centennial Exhibition, there was aroused an interest and activity in certain handicrafts, which may be said to have been a precursor of the arts and crafts movement of to-day. While not confined to any one locality, this early movement was particularly well defined in Cincinnati, where it resulted in a notable development of wood carving and of ceramic art. The beginnings in both these lines were due largely to the influence of Mr. Benn Pitman, who is more widely known as the originator of a system of shorthand, but who was in those days an enthusiastic amateur wood carver and, for the sake of introducing it, taught the craft at the Art Academy for two or three years without compensation. He also interested a little group of young women in overglaze china painting; and Cincinnati, which was among the first cities in this country to take up that craft, has from that day to this been a notable center of ceramic art. The Pottery Club of Cincinnati, organized in 1879, kept up its meetings until 1890.

In 1874 and 1875 overglaze painting was begun in Cincinnati. Miss Louise McLaughlin, who was one of the pioneers, turned her attention in 1877 to underglaze decoration, and from a painter of china became a maker of pottery. She was probably the first American worker in underglaze, though Mr. Charles Volkmar, of Corona, Long Island, began at about the same time. After the establishment of the Rookwood Pottery Miss McLaughlin stopped working in pottery for a number of years, but afterwards returned to the ranks of the craftsmen as a maker of artistic porcelain wares—a more difficult art than making pottery, because porcelain has to be fired at a temperature so near the melting point that there is danger of “warping.” Her porcelain is called “Losanti ware”, L’Osantiville being an old name for Cincinnati. She has been very successful in getting a translucent ware, of an ivory or cream tint when undecorated, and with a medium dull feldspathic glaze, and also in getting exceptionally deep reds in some of the colored pieces. Like the old Chinese porcelain, Losanti ware is fired only once, and some of the color effects are similar to those of old Chinese and Japanese ware.

Miss McLaughlin has been working in porcelain since 1898, but the Losanti ware of to-day dates only from 1900; indeed, a further improvement was made in 1902. She has worked also in metal to some extent,

Wood carving is still taught at the Art Academy of Cincinnati, and practiced by many of its graduates. In one family at least this craft has been handed down in the old-fashioned way from father to son; and Harold Fry, grandson of Henry and son of William H. Fry, the present teacher at the Art Academy, teaches wood carving at St. Paul's Cathedral School. This institution was founded in 1897 by Rev. Frank Woods Baker, D. D., then rector of St. Paul's, for the purpose of "placing the arts within the reach of all and providing night classes for those who may be employed during the day." Starting from the motto "*Vera ars est divina*," and with the idea that "each idea of something better is a step toward the spiritual," classes were organized in embroidery, sewing and dressmaking, millinery, wood carving, cardboard sloyd, drawing, water-color and china painting, burnt-wood etching, basket weaving and chair caning, cooking, etc. St. Paul's Cathedral House is a well-equipped building recently erected, mainly for the use of this school. Similar classes have been organized on a smaller scale at several other churches in and near Cincinnati, notably at St. Luke's Parish House and Christ Church Boys' Club, and at St. Paul's in Newport, Ky.

CHICAGO, ILL.

Chicago was one of the first cities in America to feel the influence of the present arts and crafts movement, which is there manifested in a greater variety of ways than in any other city in the country. The Chicago Arts and Crafts Society, which is probably the oldest society of the kind on this side of the Atlantic, was organized at Hull House, October 22, 1897. Six annual exhibitions have been held, and permanent rooms, used by a few of the members as a studio, are maintained in the Woman's Temple. The shops connected with the Hull House Labor Museum are of much importance as a center of practical handicraft. They are occupied by the bookbinding studio of Miss Ellen Gates Starr and her pupil, Peter Verberg, and provide accommodations for amateur woodworkers, potters, and metal workers, and classes in various crafts, including one in lace making in charge of an Italian woman from the neighborhood. About one-third of all the residents of Hull House have taken up one craft or another, and some fifteen Italian and Irish women living in the neighborhood are employed at spinning, weaving, and basket making in their spare time, at 15 cents an hour.

The Industrial Art League, organized in 1899 largely through the initiative of Prof. Oscar Lovell Triggs, of the University of Chicago, was for several years an important factor in the craft movement. The purposes of this organization, as set forth in its prospectus and reports, were (1) to provide workshops and tools for the use of guilds of artists and craftsmen and means for the exhibition and sale of

their products; (2) to give instruction in the arts and crafts; (3) to establish industrial art libraries and museums; (4) by publications and other appropriate means to promote the arts and crafts. The league itself neither owned nor directly conducted any workshop, but contented itself with providing opportunities and facilities for craftsmen wishing to work independently. Besides assisting in the establishment of guilds of craftsmen, however, the league's plans included at least one liberally endowed central workshop where experiments in industry might be carried on. The activities of the league were very largely of an educational and social nature, including lectures on industrial and social topics, mass meetings for the purpose of presenting the claims of industrial art and industrial education, an industrial art conference, receptions held in connection with exhibitions at the league rooms, and other meetings. Professor Triggs, the secretary of the league, has written and published a book entitled "Chapters in the History of the Arts and Crafts Movement," which bears the imprint of the Bohemia Guild of the league. An exhibition and salesroom was maintained at 264 Michigan avenue, which was also the headquarters of the Bohemia Guild. The University Guild, at 5001 Lake avenue, was not long continued, but its place is practically filled by the shops of the South Park Workshop Association and the Longwood Art Industry. The membership of the league in 1903 exceeded 400, and its disbursements have reached nearly \$4,000 a year. The league was discontinued early in 1904, its functions having been to a considerable extent assumed by other organizations.

The Longwood Art Industry, "a guild and school of associated arts, education, and industries," has been established at Longwood, a suburb of Chicago, by Mr. George L. Schreiber, who formerly worked in the University Guild of the Industrial Art League. A stock company was organized in the spring of 1903 with a capital stock of \$2,500, and a building formerly occupied as a church was secured for a workshop, and provided with an equipment for making furniture, interior furnishings, thrown and cast pottery, metal work, and other artistic products. Stock is issued in \$1 shares, and is held by artists, teachers, and artisans, as well as by several of Mr. Schreiber's neighbors who have become interested in craftsmanship. Stockholders have the privilege of using the workshop for the making of any product desired, by paying a small fee for the use of the necessary tools; the workbenches, potters' wheels, and kiln are placed at their disposal, subject only to certain regulations to prevent conflicts in respect to the time of using them. Flax for use in the production of linen fabrics has been sown in the garden surrounding the workshop. Classes in the fictile, textile, and other arts are held, both for adults and for young people, and arrangements are made for the board and care of boys coming from a distance to attend these classes, especially during the summer.

The South Park Workshop Association was organized in April, 1903, for the purpose of establishing and maintaining a neighborhood workshop for the use of persons desiring instruction or the opportunity of practice in the various arts and crafts. Through the courtesy of Mr. H. C. Whitehead a workshop building at 5835 Kimbark avenue was placed at the disposal of the association, while the Industrial Art League contributed the equipment of benches and tools for wood working formerly used at the Bohemia Guild. This workshop is used regularly by one cabinetmaker, and from time to time by others who come in to do wood working or bookbinding. The membership fee of \$5 a year pays for the privilege of using the workshop and its general equipment. As the demand arises and as the means of the association will allow, appliances for weaving, metal work, and other crafts are to be added, and general and technical lectures are to be given at intervals on subjects connected with the arts and crafts. The plans of the association also include the building and equipment of a permanent workshop for the use of its members and for classes in various handicrafts. The work of the association is directed by an executive committee of nine members, and by committees on membership, finance, workshops, lectures, and publications.

Another manifestation of the arts and crafts movement in Chicago is the establishment of small shops by one or two craftsmen for the making of artistic articles, and in some cases also for the exhibition and sale of such products from other places. Thus the Wilro shop has been opened in the Fine Arts Building by the Misses Rose and Minnie Dolese, for the making of leather and metal articles, dower and wardrobe chests, pottery, illuminated quotations, etc. The Kalo shop of Miss Clara P. Barek, in the same building, is of a similar character. At the Swastica shop, established by Miss Mary E. Ludlow and Miss Katherine L. Mills, in the Marshall Field Building, artistic products from various parts of the country are gathered together for sale, or are executed to order. With this shop has been merged "The Iron Lantern" of Miss Robie.

The admirers of William Morris in Chicago have organized a Morris Society for the purpose of familiarizing the public with his artistic and social ideals, through publications, local study circles, lectures, exhibitions, etc., and also to encourage the founding of studios, workshops, schools of design, and manufactories upon the basis of artistic craftsmanship, and to cooperate with other societies which aim to socialize art and elevate craftsmanship. The society publishes a monthly bulletin containing announcements of interest to its members, and plans to establish clubrooms, which will serve as headquarters of the society. The Chicago Art Institute, which includes the art crafts among its exhibits, has been asked to cooperate with the society in establishing a Morris museum. President Edmund J. James, of North-

western University, was the first president of the society. Prof. Oscar L. Triggs is now president and Mr. Edmund Buckley is secretary. Each local circle recognized by the society is privileged to nominate a vice-president, and the council already includes members from various parts of the country.

A unique arts and crafts exhibition of special interest to the admirers of William Morris was arranged by the late Joseph Twyman at the sales rooms of the Tobey Furniture Company in the form of a Morris memorial room, furnished with the products of Morris's own establishment and a few other articles conforming to his ideas.

BOSTON, MASS.

The Boston Society of Arts and Crafts was organized in the autumn of 1897, at nearly the same time as the Chicago society; but its activities, which during the first three years were confined mainly to social meetings and addresses and a temporary public exhibition, have been extended in a marked degree during more recent years. The society now maintains a permanent exhibition and sales room at No. 9 Park street, where a variety of handmade articles, admitted for sale by the jury, are kept on view. For two years, beginning in April, 1902, the society published a small monthly magazine called "Handicraft," edited by Mr. Arthur A. Carey, president of the society, with Messrs. Charles Eliot Norton and H. Langford Warren as associate editors.

The Society of Arts and Crafts, in cooperation with the South End House Association, has established a lace industry under the direction of Mrs. E. J. Weber. This work was first begun in February, 1901, in the Women's Residence of South End House, but is now done in a room designed for the purpose in the South Bay Union, the new neighborhood building of the settlement. The industry began with the employment of one young woman, but from two to five have been at work almost from the beginning. Both pillow lace and point lace are made in a number of choice varieties, according to designs by Mrs. Weber or by duplicating old patterns, and a specialty is made of the restoration of old laces—a kind of work which formerly had to be sent to Europe. Since the workers have been thoroughly trained a good business has been done in both old and new laces. The workers were employed at first at about average dressmakers' wages, which were increased as the operators became skillful. After spending about \$1,000 upon the enterprise without making it self-supporting, the Society of Arts and Crafts withdrew its financial support, and the industry is now organized on a cooperative basis, a friend supplying the necessary capital.

The Handicraft Shop, at No. 1 Somerset street, is an enterprise closely affiliated with the Society of Arts and Crafts, though not *established* by the society as such. It is an outgrowth of some

experiments in producing cordovan, or gilded leather, conducted by the Misses Ware (now Mrs. Mary Ware Dennett and Mrs. George Q. Hill). The shop was started cooperatively by Mr. Arthur A. Carey, president of the Society of Arts and Crafts, who supplied the necessary capital, Mr. Frederic A. Whiting, secretary of the society, who had a general supervision of the business, and Mrs. Dennett, who served as adviser in art matters. The shop produces metal work chiefly, though a beginning has been made in wood working. The shop employs one young woman as a designer and worker in silver, and four men, three of whom served their apprenticeship in Finland. One of these men is a silversmith, one a silversmith and jeweler, and one a coppersmith and silversmith. Two or three other craftsmen rent space in the shop and work there independently. The shop has become self-supporting, and has been incorporated, with Mr. Carey as president. Its removal to the country is under consideration.

The Boston Society of Decorative Art, organized in 1878, conducts at 222 Boylston street a workroom for the production of high-grade embroideries, and a salesroom for the exhibition and sale of these and other decorative articles. This society regularly employs about 19 women, and at busy seasons as many as 25. They work at home for the most part to save car fare, but come to the society's workshop to learn new designs or to execute large pieces of work. They are paid by the piece, once in two weeks. Among them are a few cripples who make their living by fine needlework. The society also receives the work of outside contributors to be sold, charging a commission of 10 per cent; but the articles so received must be passed upon as to artistic merit by an examining committee. There are more than 100 active contributors, who work in leather, wood, basketry, embroidery, pottery, china painting, etc. Besides its permanent salesroom, the society conducts temporary exhibits and sales at various summer hotels. The total sales during 1902 amounted to \$16,478, about one-fourth of which represented the work of outside contributors.

The Women's Educational and Industrial Union, at 264 Boylston street, also receives for sale on commission, in its handiwork department, articles made by women. The articles exhibited there include hammered silver, enameled jewelry, picture frames, woven rugs, and needlework of various kinds. Special sales are held preceding Christmas and Easter, and also at various summer resorts. In order to maintain a high standard of excellence and as far as possible of original design, the handicraft committee makes a weekly examination of articles submitted for sale. For articles sold within the first six months the commission is 10 per cent.

Classes in various handicrafts, primarily for boys and girls, are held at Lincoln House, 116-122 Shawmut avenue, where annual arts and crafts exhibitions are held to show the work of the various classes, from

The Society of Decorative Art of New York has a workroom, sales room, and classes in embroidery and other needlework at 14 East Thirty-fourth street. The workers who are regularly employed in the workroom or at home vary in number at different times from half a dozen to fifteen or twenty; but more than half of the sales represent the work of outside contributors, of whom there is a very large number. Articles approved by the committee on admission are sold at a commission of 10 per cent, or in the case of out-of-town sales, as at summer resorts, 20 per cent. The sales amount to about \$40,000 a year.

A "permanent exhibition of arts and crafts" is held by the Taft & Belknap Company at 1 East Fortieth street. The exhibits include porcelains, pottery, tiles, metal work, rugs, leather work, wood carving, etc.

The Manhattan Trade School for Girls was opened in November, 1902, at 233 West Fourteenth street, for the purpose of training girls for skilled trade hand work, though the use of machinery is not altogether tabooed. The management is composed of prominent philanthropic, social, and educational workers. The director is Mrs. Mary Schenck Woolman, who is also in charge of the domestic art department at the Teachers' College.

Important work in developing the manual skill of young people is also done at Pratt Institute, Brooklyn, and as part of the parish work of St. George's Church, and also in connection with various settlements, boys' clubs, etc.

SYRACUSE, N. Y.

Syracuse has become a center of the arts and crafts movement, through the efforts of Mr. Gustav Stickley, founder and director of the Craftsman Workshops, formerly known as the United Crafts. This establishment is the outgrowth of a cabinetmaking industry at Eastwood, a suburb of Syracuse; but a large building near the center of the city is now occupied for purposes of exhibition and sale, and for the production of metal work, needlework, etc. The leather used in the furniture is dressed in a special way, and the wood, before the stain and shellac are applied, is prepared by being subjected to the fumes of strong ammonia, which darken it. The ideals of the Craftsman Workshops are expressed in the following words:

We have pledged ourselves never to produce anything that shall degrade a man to make or to sell. We have set before us the ideals of honesty of material, solidity of construction, utility and adaptability to place, and æsthetic effect.

In 1902 a kind of profit sharing was introduced by setting aside \$2,000 to be divided among the workmen by a committee appointed by the men themselves. This sum was divided into shares of from \$5 to \$100, the amount awarded to each workman being based upon length

rooms which were maintained for a time have been given up for lack of funds and workers.

The Philadelphia Society for the Employment and Instruction of the Poor gives employment to women in sewing.

The Philadelphia Society of Art Needlework was organized in 1877, to provide fine needlework and give employment to gentlewomen. It pays for the labor of the workers and sells the products. The present headquarters are on Spruce street, near Thirteenth street.

The Decorative Art League of Philadelphia was organized in 1894 to encourage excellence in decorative handiwork. An annual sale is held in November and December of each year at 1709 Chestnut street.

The production of textiles has been promoted by the Philadelphia Textile School of the Pennsylvania Museum and School of Industrial Art, at 320 South Broad street, and by the Warp and Weft Club, composed of some of the students and graduates of that school.

Important work of an educational character, tending to promote craftsmanship, is done in the department of fine and applied art of Drexel Institute, and in the Philadelphia School of Design for Women. The alumnae of the latter institution have a semiprofessional association, which provides lectures and other entertainments.

The Depository and Philadelphia Exchange for Women's Work, corner of Thirteenth and Walnut streets, sells needlework, burnt wood, embossed-leather articles, and woven silk portières, etc., made by its members and approved by the committee. The organization retains a commission of 15 per cent, in addition to the annual fee of \$2.

DAYTON, OHIO.

The Arts and Crafts Society of Dayton was organized in March, 1902, as the result of an address before the Present Day Club by Mr. Brainerd B. Thresher, who was elected president. It brings together a number of local craftsmen, but is for the most part a society of students, organized for study and practical work under an instructor.

The class work began with an introductory summer course of six weeks, beginning August 1, 1902, under the instruction of Mr. and Mrs. Hugo Froelich. The success of this first attempt led the society to institute longer courses of study, and Mr. F. E. Mann was called to take charge of the classes. These were held in the manual training school, in the Y. M. C. A., and in Mr. Mann's studio. The following year the society obtained a suite of nine rooms for studios, and equipped them for designing and work in the various crafts. A number of scholarships are offered for the benefit of those who would otherwise be unable to attend, especially pupils from the manual training and high schools and artisans. This third year, 1904-5, the

parts of the country. The art crafts chiefly practiced in Richmond are basketry and china decoration; there are also a few wood carvers. Miss Emma Bond, teacher of sewing and basketry in the public schools, makes baskets from grasses gathered in the vicinity. Another teacher is quite skillful in making corn-husk baskets.

The Quisisana Art Workshop was opened at Laporte, Ind., in 1901, through the initiative of Mr. F. H. Simons, for the purpose of keeping the talented young people of the place at home and lessening the movement to large cities in search of employment. At one time as many as 20 workers were engaged in making artistic furniture, wood carving, pyrography, designing, etc. Most of the orders were taken in Chicago, where the Industrial Art League, which had helped to promote the enterprise, received and forwarded them. It has been found necessary, for the present at least, to discontinue the smaller handicrafts, and the shop is now devoted exclusively to furniture making. An effort is made to find workmen who combine manual skill with originality in design.

NEW ORLEANS, LA.

The art department of the H. Sophie Newcomb Memorial College (the women's college of Tulane University), New Orleans, La., began the manufacture of decorated pottery as an experiment in 1895, as an outlet for the artistic skill of its graduates. The experiment was attended with such an encouraging degree of success that in 1901 the administrators appropriated a sum of money for the further development of the enterprise and the erection of a special building. Although the industry is now of more than merely educational importance, it is still conducted under the supervision of the Newcomb art department and a prominent factor in the courses of instruction. Students of drawing, painting, and designing are admitted to the pottery for instruction and practice in applying design to pottery. As soon as a pupil reaches the required standard of excellence her work is purchased for sale or exhibition, and when further instruction becomes unnecessary she has the privilege, without the payment of fees, of remaining at work as an independent producer. It is impressed upon the workers that pottery affords much the same opportunity as other forms of art for the making of individual reputation, and that the responsibility for a design is the same as that for a picture. They are allowed to exercise the greatest possible liberty in working out their ideas, either in modeling, incising, or painting, or in the three methods combined, and also in the choice of colors; but the quality of the paste and other conditions of production have led to the extensive use of a greenish-blue color, which helps to give the Newcomb pottery its individuality. The characteristic decorations of this ware consist of more or less conventionalized forms suggestive of the southern flora. For the unpainted

ware a wide variety of colored glazes is used and often in original and striking combinations.

Newcomb pottery is made from clay taken from the Bayou Tchulakabaua, in Mississippi, and is usually fashioned by a professional potter employed for the purpose. The designs are never duplicated, except in the case of the Newcomb mug, which is painted either in standard or exclusive designs. Each piece bears the monogram of the college (a letter N encircled by a C), besides the marks of the potter and designer and the ledger number. This ware has won medals at the Paris, Buffalo, Charleston, and St. Louis expositions.

The pottery is decorated under the immediate supervision of Prof. Mary G. Sheerer, and the industry is under the general direction of Prof. Ellsworth Woodward, director of art instruction in Newcomb College.

The top floor of the pottery building is occupied as a loom room by the textile department. The college has also developed a needlework industry in the interest of design and handicraft, the designs being original and executed only once. All the work offered for sale is approved by the art department, and bears the signature of the designer and the letters N T N or the college monogram.

ALFRED, N. Y.

The State of New York has established a school of clay working and ceramics at Alfred. The Alfred summer school, especially, attracts enthusiastic artist-potters from various parts of the country, and combines a full clay-working equipment with the spirit of the studio and laboratory. Secret investigations are discountenanced, the policy of the school favoring free exchange of information and mutual encouragement. Clays and shales are found in the vicinity of Alfred in sufficient variety to afford a number of different bodies, which are utilized in thrown work, coiled work, jiggering, casting, and pressing. A full series of matt glazes has also been prepared, and instruction is offered in underglaze decoration, as well as in modeling, drawing, design, and general painting. Alfred is favorably situated for summer work, being 1,800 feet above sea level, amid pleasant surroundings.

CHAUTAUQUA, N. Y.

The summer schools of the well-known Chautauqua institution now include an arts and crafts school, which offers instruction and opportunity for practice during six weeks in the summer. There is now a complete equipment for manual training, art furniture making, wood-carving, bookbinding, art metal work, leather tooling, pottery, bas-

ketry, and weaving. A class in art and design for teachers and a special class in design for the crafts have been added to the regular art courses in painting, clay modeling, and sketching.

IPSWICH, MASS.

Mr. Arthur W. Dow, of Pratt Institute, Brooklyn, has established a summer school of art at Ipswich, Mass., 27 miles northeast of Boston. The courses in handicraft include instruction in basket weaving (using native grasses), dyeing, weaving on the hand loom, perforated metal, stencil printing, and pottery. It is hoped that this school will develop a local village industry which will enlist the interest of many of the permanent residents.

DEERFIELD, MASS.

The Deerfield Society of Blue and White Needlework is a pioneer enterprise in the direction of village industries, dating from 1896. It was organized by Miss Margaret Whiting and Miss Ellen Miller, for the purpose of reviving the New England embroidery of the eighteenth century, which reached a high state of development just before the Revolution, after which it was gradually superseded by imitations of foreign work. In designing the patterns an effort is made to keep as close as possible to the spirit of the colonial designs, but to improve upon them wherever possible instead of copying them exactly. Hand-spun, home-woven linens are used as far as practicable, purchased from Berea College and from weavers in Georgia and Vermont. Some of the finer grades are imported from abroad. The unsatisfactory character of the commercial blues has forced the society to do its own dyeing with indigo dyes. These produce three or four different shades of blue. Pink, green, and other colors, all produced from natural sources, are also occasionally used. Work sold by the society is marked with the letter D in a conventionalized spinning wheel.

The society employs between 20 and 30 workers, paying them out of its treasury, by the piece, on a basis calculated to represent 20 cents an hour for the best work. For the first five years one-half of the proceeds from sales went to the workers, one-fifth to the designers, and the remaining three-tenths constituted an expense fund; but a large proportion is now devoted to expenses. The embroideries are sold to summer tourists, through arts and crafts exhibitions, and by correspondence. The sales have steadily increased till they amount to about \$2,000 a year. The secretary, Miss Margaret Miller, is in charge of the business. The prices vary with the design and work. A 6-inch doily may be had for \$1.50; 9-inch doilies for \$2.50 to \$3.50; center-pieces, \$6 to \$25; table squares, \$8 to \$30; lamp squares, \$5 to \$8; pillow covers, \$10 to \$20; bureau covers, \$6 to \$18; stand covers, \$5 to \$10.

some four hundred other religious colonies, and which was thus one of the most fertile sources of the industrial and intellectual revival in Europe.

The Rev. Edward P. Pressey has adopted the name New Clairvaux for a training school and settlement which he has founded at Montague, Mass. Mr. Pressey began his social and industrial revival in 1897, during a pastorate at Rowe, Mass., by an attempt to repeople the abandoned farms in that vicinity, and in other ways. In the spring of 1900 he removed to Montague and opened a Sunday school in an abandoned church building, which the people of the town helped him to repair. The next year he set up a printing press in his own house and also acquired a farm to provide fruit and country produce. During the following winter and spring a manual training shop was erected in the village, by the side of the creek, which furnishes power to the printing press.

A family school for boys and girls from 5 to 20 years of age has been established, in which the training consists of farming, housework, and trade apprenticeship in printing, wood working, and other crafts. Portions of the new shop are to be used for bookbinding, wood working, etc., and a special library of works on mechanical science and the arts and crafts is to be collected. Under the head of "settlement work" Mr. Pressey includes the voluntary services of visitors of skill and culture, and the organization of the New Clairvaux Arts and Crafts Society, of which he is business agent and Mrs. Pressey president. In the winter of 1902 exhibitions of the work were held in and about Boston. At these exhibitions there was a good sale of embroidery, raffia beach pillows, rugs of different colors, baskets, leather work, knitted articles, etc. Vegetable dyes are used in the production of the rugs. The society has had the benefit of instruction in embroidery and other crafts by visitors.

HINGHAM, MASS.

The Hingham Society of Arts and Crafts, organized in 1901, aims to promote artistic work in all branches of handicraft. The society holds a yearly exhibition, at which the income from the sales of goods now amounts to about \$800, and has permanent sales rooms open three days in the week. The articles made in Hingham are various, including reed, raffia, and palm-leaf baskets, rugs of unusual kinds, bayberry dips, handmade wooden toys and other wooden ware, furniture (including tall clocks), beadwork (including chains, belts, collars, bags, etc.), and especially work in white embroidery, including bedspreads, table covers, curtains, workbags, etc. A designer adapts old designs to modern needs, and a dyer, who has had great success with vegetable dyes, colors the raffia for the baskets. Fringes for four-posted bedsteads, nettings, curtains, doilies, and Florentine embroideries are also

made. Two-thirds of the members of the society are women. Goods offered for sale must be approved by a committee, and members learning their craft through the society are not allowed to sell their work through any other agency, membership in the society being forfeited if this regulation is violated. The distinctive mark of the society is a representation of an old-fashioned bucket such as used to be made in Hingham many years ago.

ROSE VALLEY, MOYLAN, PA.

Rose Valley is a little settlement of craftsmen at Moylan, Delaware County, Pa., near Philadelphia, dating from the spring of 1902. The community owes its existence to the enthusiasm of Mr. Will Price, an architect and designer of Philadelphia, who entertains advanced ideas about the proper relations of labor and capital and the motives which should lead to production. The Rose Valley Association is a chartered stock company with a capital of \$25,000, all of which was expended in purchasing and improving the Rose Valley property, consisting of about 80 acres, with water power, artesian wells, and several buildings, including residences and an abandoned mill which is used for a workshop. The dividends are limited to 6 per cent, and any surplus is to be devoted to further improvements of the property. "The Artsman" is the official organ of the association.

The association does not itself conduct the industries, but merely rents out the buildings and power, and so provides the opportunity by the aid of which its members or others may establish industries as individual enterprises, the association retaining some right of supervision as to the character of the work produced, and giving the products the advantage of the association's seal, showing a V in a conventionalized wild rose. The work must be absolutely honest and intelligent in design and workmanship. A considerable part of the work already accomplished has been the making of furniture to order after special designs. The principal room in the workshop is devoted to this industry. It contains a row of three benches facing the large windows which make up one side of the shop, a drafting table, and a power band saw, circular saw, and mortising machine.

Four men are employed in the furniture shop on a wage basis, Mr. Price believing that the essential end of cooperation can be attained better under the wage system than through any communistic system. The opportunity to work under pleasant conditions and amid congenial surroundings is much appreciated by the men. An attempt is being made to develop individuality of execution among them. The result is a product as different from the so-called "mission" furniture as the latter is from the product of ordinary factories. Glue is very little used, and is never depended upon for strength; there are no glued-on blocks. Chair backs are cut out of solid wood; table tops

are double dovetailed, and no attempt is made to conceal joints or pegs. The grain of the wood is carefully selected for the particular use to which the wood is to be put, and free use is made of carving by way of ornament. The result is handsome and expensive furniture, the prices depending upon the time employed in making particular pieces, with adequate allowance for cost of materials. An exhibition has been held at the city offices of the shop, and a market has easily been found for the products. About \$3,000 worth of furniture was turned out the first year, and while there was a loss at first, the business of the year as a whole was self-supporting.

Hand weaving, metal work, and the making of pottery which shall be useful as well as ornamental are among the industries to be developed at the Rose Valley shops. There is an attractive guest house, furnished partly with products of the shops, where members of the community may entertain their friends, and where other visitors may be accommodated at a moderate charge for board.

Rose Valley is not a distinct municipality, but a monthly "folk mote" is held for the discussion of matters pertaining to the community. A chairman is selected for each meeting, and there is no permanent officer except the secretary. The suffrage is accorded to all members (of whom there are about 50) without distinction of sex or age. Thus an effort is made to keep the management of the community on a democratic basis and to avoid the dominance of any one personality.

BYRDELIFFE, WOODSTOCK, N. Y.

The Byrdcliffe Summer Art School, in the Catskills, near Woodstock, marks the beginning of what it is hoped may become a permanent art village. The projector of the enterprise, Mr. Ralph Radcliffe-Whitehead, has bought a tract of land comprising about 1,200 acres, mostly on the southern slope of a mountain, has erected studios, workshops, and a students' boarding house, and will sell a certain part of his property to others wishing to build studios or houses. It is not intended to make this a summer enterprise wholly, nor chiefly, but rather to make permanent homes, together with a school of painting, decoration, and handicraft, which students may attend at all seasons of the year.

The classes in painting and design are taught by Mr. Birge Harrison and Mr. H. Dudley Murphy. These and the other classes in wood carving, picture-frame making, and color printing from wood blocks are open from June to September. The workshops for cabinetmaking and metal work run the year round. The business management is in the hands of Mr. Radcliffe-Whitehead. There is no formal community or business cooperation at present, but it is hoped that independent artists may be induced to settle on part of the land.

GLEN EIRIE, SAUGERTIES, N. Y.

A stock corporation, under the title of "The Glen Eirie Workers," has been formed by a number of gentlemen in New York and vicinity, for the purpose of establishing an industrial colony at Glen Eirie, in the town of Saugerties, Ulster County, N. Y. It is authorized to erect and lease buildings, manufacture and sell articles of any kind, make and execute contracts for any work pertaining to art, and operate a store for the purchase and sale of general merchandise. The certificate of incorporation provides that the duration of the corporation is to be perpetual, and that it may issue stock to the amount of \$100,000, one-half of which shall be preferred stock, in shares of \$10 each. The corporation will begin business when \$1,000 shall have been subscribed.

The rules of the corporation provide as follows:

No dividends shall be paid on the common stock until a dividend or dividends aggregating ten (10) dollars a share shall have been paid upon each share of preferred stock; thereafter the holders of said preferred stock shall be entitled to receive in each year out of the accumulated profits of the corporation, in excess of such sum, if any, as shall have been fixed and reserved as a working capital, a noncumulative dividend of six per cent, payable quarterly, half yearly, or yearly, as the directors may from time to time determine, before any dividend shall be set apart or paid on the common stock of the corporation. If the accumulated profits in excess of the sum fixed and reserved as a working capital shall not be sufficient to pay in any year a dividend of six per cent on said preferred stock, then such dividend shall be paid thereon as such excess of accumulated profits will suffice to pay; but the dividends thereon shall not be cumulative, but shall be payable for each year only out of the accumulated profits in excess of the sum fixed and reserved as a working capital, and not out of accumulated profits of any subsequent year or years.

The company has contracted to acquire the village of Glen Eirie, formerly a white-lead manufacturing center, now disused by reason of consolidation in that business, and 100 acres of woodland adjacent thereto. The property lies on both sides of the united Plattekill and Esopus creeks, and includes a water power of several hundred horsepower, which is said to be capable of further development. The location is in the foothills of the Catskills, near the Hudson River, and easily accessible from both New York and Albany.

The plan of the promoters is to establish "an artistic colony and an industrial center where work of the highest artistic value may be produced by skilled artisans, living under much more favorable conditions than can be obtained in the crowded streets of the metropolis, freed from the exigencies of a costly standard of living, of high rents, of studios with sufficient space difficult to obtain, of the strenuous and commercial atmosphere in which are wanting the serenity, the inspiration, the aloofness requisite for an undivided devotion to the fine

The workers will be of two classes—(1) workmen in the employ of the company and (2) independent craftsmen working on their own commissions. The company and its affiliated workers will undertake to execute from special designs, and without duplication (except with the original purchaser's consent) ecclesiastical and domestic furniture, sculpture and carvings, stained and leaded glass, metal work, ceramic decorations, plaster casts, leather work, books and bindings, silk and cotton printed fabrics, wall papers, etc. It will also be prepared to contract for and execute interior decorations for both public and private buildings. Inquiries and orders have already been received in sufficient number to warrant the commencement of operations.

The sources of revenue of the company will include the contracts, rent from houses, studios, workshops and power leased to independent workers, and from power let to outside parties, and the manufacture of certain specialties in mosaic, metals, and wood.

The promoters of this enterprise are Messrs. William Horatio Day, Eliot Norton, and William Walton, of New York City, and John W. Craig and Benjamin S. Warner, of New Jersey. A New York City office has been opened at 156 Fifth avenue.

HAND POTTERY IN VARIOUS PLACES.

Miss Fayette Barnum, of Louisville, Ky., has been working in pottery since 1898, taking her motifs from local sources of inspiration, and producing among others a semiglazed ware called "lichen" ware from its peculiar texture and appearance. One of her most striking pieces is a child's mug on which a goose pursues a fleeing urchin. Some of her bowls and vases are covered with a loose netting of raffia, which adds to their attractiveness.

Mr. A. Van Briggles, a practical potter in his youth and for a time a decorative artist at the Rookwood Pottery, removed to Colorado in 1899, and after conducting some experiments in the laboratory of Colorado College, established a pottery at Colorado Springs. He died in July of the present year, but the work of the Van Briggles Pottery Company is carried on under the direction of his widow. By the use of high temperatures, a dead glaze is produced of a texture similar to that of old Chinese pots.

Mention should be made of the Dedham pottery produced at Dedham, Mass.; of the work of Messrs. Henry C. Mercer and W. R. Mercer, jr., at Doylestown, Pa., and of the Teco ware made by the Gates potteries at Terracotta, Ill.

INDIAN WORK.

A report on American handicraft would be incomplete without a reference, at least, to the work of the Indians. This subject would require a separate article for adequate treatment, but it may not

be inappropriate to mention here the efforts of certain philanthropists and connoisseurs to revive the Indian handicrafts, where they seemed in danger of dying out, or to establish new industries for the employment of Indian women.

Of the latter character is the work of Miss Sybil Carter, a deaconess of the Protestant Episcopal Church, who in 1890 visited the White Earth Reservation, in Minnesota, and taught a few Ojibway women something of the art of lace making. She found that the women learned the work readily and were most anxious to be provided with an occupation. Miss Carter asked the help of her churchwomen, and was able to secure funds to send out two teachers in 1890-91, becoming in 1892 a resident of White Earth herself. Gradually the work has grown until there are four groups of Indian women in Minnesota, each with a teacher, and one each in Wisconsin, South Dakota, New York, California, and Nebraska, all learning to make lace. Lace sales are held annually in a number of eastern cities, and the lace is easily disposed of as rapidly as it is made. It sells for only about enough to pay for the materials and wages of the makers. The small salaries of the teachers (\$300, with board and fuel) are made up from voluntary contributions of interested persons. Miss Carter has an office in the Church Mission House, New York City.

The Mohonk Lodge is an industrial and philanthropic institution among the Cheyenne and Arapaho Indians at Colony, Okla., under the direction of Rev. Mr. and Mrs. Walter C. Roe, missionaries of the Reformed Church in America at that place. The means for its establishment were provided by the Lake Mohonk Conference of the Friends of the Indians in 1898. Its object is to provide a workshop, social center, and home for the surrounding Indians. The plant consists of a roomy frame building, containing ten rooms of varying sizes. A competent matron lives in the building, keeping it in order and looking after the needs of all visitors. She is supported by philanthropic donations. The industrial department is under the management of Mr. Reese Kincaide, a Government employee at this agency. The old-time beadwork on leather made by the Plains Indians is the line of work adopted. Two lines of goods are being produced—genuine reproductions of old Indian articles and adaptations of Indian work to articles of modern use. Under the former head would be classed moccasins, pouches, tobacco bags, costumes, etc.; under the latter golf belts, slippers, pocketbooks, purses, book covers, etc. The materials are provided and the Indian women are paid cash for their work. The number of workers on the roll exceeds one hundred. They receive their work in such form that it can be taken to their homes and returned when finished. Markets have been found in all parts of the United States, and some goods are sent abroad. For the year ending October 1, 1902, goods were sold to the amount of \$4,000, \$2,600 of which was paid in

cash to the Indians. The goods are sold through curio stores, shoe houses, art establishments, etc., while a large mail business has sprung up at the Lodge itself. It was estimated that the sales for 1903 would amount to \$5,000. Outstations are being planned, and the design is to make the Mohonk Lodge a central establishment for marketing the goods produced among many different tribes. Thus far the enterprise has proved an unquestionable success in providing the Indians with a self-supporting industry.

The National Indian Association's department of industries, of which Mrs. F. N. Doubleday, of New York, has been the leading spirit and until recently chairman, encourages the development of the original Indian handicrafts, especially basketry and pottery, and also blanket weaving, beadwork, lace making, etc. Among the Chitimachan Indians of Louisiana this philanthropic association has preserved and is developing the art of weaving a double basket peculiar to the tribe, which had very nearly become a lost art, being practiced by only one old woman. The young women refused to be taught the handicraft because it involved filing the teeth in order to split the cane, but their white advisers introduced the use of scissors, and now 18 of these young women send to New York every month \$100 worth of baskets, which are rapidly sold in the shops. They also prepared an exhibit for the St. Louis Exposition.

The Indian Industries League, the Sequoia League, and the Basket Fraternity of Pasadena, Cal., are other organizations interested in fostering Indian handicrafts. Many explorers and merchants now assist in the exhibition and distribution of Indian products. The Pueblo Indians of New Mexico find a market for their blankets through Mr. Francis E. Lester, of Mesilla Park, New Mexico. Their blankets, which are in demand as house decorations, are altogether handmade, the wool being sheared, washed, carded, spun, dyed, and woven by the Indians. Their looms are clumsy, cumbersome affairs, resembling the framework of a cottage.

Miss Estelle Reel, superintendent of Indian schools, has introduced instruction in native handicrafts in many of these schools.

PORTO RICO.

The natives of Porto Rico fashion a variety of useful and ornamental articles by hand from the palm leaves, gourds, cocoanuts, and other products of the island. They are skillful in weaving hammocks, hats, similar to Panama hats, and a great variety of baskets. Canes, paper knives, and other articles are carved out of the native woods, some of which show curious and strikingly ornamental markings. An exhibit of Porto Rican handicrafts has been sent to the St. Louis Exposition. The insular industrial schools seek to preserve and develop the skill of the natives in woodworking, hat and basket weaving, etc.

The señoras and señoritas of Porto Rico are especially skillful with

the needle, and produce a considerable quantity of fine drawn work and laces. An effort is being made to establish a market for these products in the States.

CONCLUSION.

While the articles produced by handicraft in the United States are of small value compared with the products of machinery, and can not be expected to increase to such an extent as to diminish noticeably the demand for factory products, the revival of handicrafts is of no little importance to a considerable number of persons. The workers themselves are perhaps the persons most affected, and in many cases the arts and crafts movement has brought to them at once a means of livelihood and a new interest in life. To the consumers, and the public generally, the movement has brought increased pleasure in the things of daily household use and ornament. The artistic and industrial importance of the handicraft revival can not be measured by the quantity of handmade goods produced, for the standards of durability and taste set by the craftsmen make their influence felt in improving the quality and design of factory-made goods; and this, however far it may be from the intention of the craftsmen, is perhaps the most far-reaching effect of their work.

AGREEMENTS BETWEEN EMPLOYERS AND EMPLOYEES.

[It is the purpose of this Bureau to publish from time to time important agreements made between large bodies of employers and employees with regard to wages, hours of labor, etc. The Bureau would be pleased to receive copies of such agreements whenever made.]

AGREEMENT BETWEEN PAINTERS' DISTRICT COUNCIL AND CONTRACTING PAINTERS OF CHICAGO AND VICINITY, MARCH 1, 1904, TO MARCH 1, 1906.

Articles of agreement between ———, contracting painters of the city of Chicago, county of Cook and State of Illinois, party of the first part, and the Journeymen Painters' District Council of Chicago, and Vicinity, of the Brotherhood of Painters, Decorators, and Paperhangers of America, parties of the second part.

The party of the first part covenants and agrees, in the consideration of the strict observance by the parties of the second part of certain rules, regulations, and obligations herein set forth, that he or they will faithfully keep and strictly observe the following rules:

SECTION 1. Eight hours shall constitute a day's work, which shall be between the hours of 8 a. m. and 5 p. m., and should it be necessary to continue work after said time, there shall be a cessation of work for at least one hour. But it is expressly agreed that no work shall be done *under any circumstances on Labor Day*, or between the hours of 12 o'clock noon and 12 o'clock Saturday night, unless for immediate danger to loss of life or to property, and in all cases permission be secured from the representative of the Painters' District Council. Saturday afternoon to be paid for at the rate of double time.

SEC. 2. All overtime on regular working days shall be paid for at the rate of time and one-half, and work done on Sundays, New Year's, Thanksgiving Day, Decoration Day, Fourth of July and Christmas, shall be paid for at the rate of double time; the above-mentioned days to be from 12 midnight to 12 midnight as per calendar.

SEC. 3. The minimum rate of wages shall be forty-five cents (45 cts.) per hour on and after March 1, 1904, and until March 1, 1906.

SEC. 4. The party of the first part hereby expressly agrees with the parties of the second part, that they will each run a strictly union shop and pay the scale of wages provided in section 3 herein, and also that they will refer all painters applying for work, and not in possession of the current quarter's working card issued by the Painters' District Council, to the secretary of the Painters' District Council, and that they will cause to be hung in a conspicuous place in their shop a card stating that none but *union* men are employed in such shop.

SEC. 5. The said party of the first part hereby agrees to establish and maintain a weekly pay day which shall be Saturday between 12 m. and 1 p. m., at which time all employees shall be paid in full, in lawful

money of the United States of America, but when a journeyman is discharged or laid off, he shall be paid at the time of such discharge or at the time of such lay off. No more than 1½ days' pay shall be held back by the employer.

SEC. 6. The said party of the first part shall have the right to employ one boy under the age of eighteen (18) years, as an apprentice, and one additional boy under said age for every twenty (20) journeymen employed by said first party; such boy or boys to be bound by contract or indenture in writing for a term of three years, and said first party shall therein agree to keep said boy in continuous employment until the expiration of said time, and shall at the expiration of such time furnish said boy or boys with his indenture papers or credentials.

SEC. 7. Said party of the first part further agrees that they will not subcontract to any of their employees or others by contract or otherwise, any wall washing, painting, glazing, paper cleaning, or any character of hardwood finishing, either on contracts or in factories, and under no circumstances shall they employ laborers or nonunion men to do any class of preparatory work in any branch.

SEC. 8. All car fare above ten cents must be paid by the contractors where journeymen are employed, also all railroad fare outside the city limits.

SEC. 9. When journeymen are sent outside the city limits, where it is impracticable for them to return to their respective homes each evening, their board shall be paid by the contractor.

SEC. 10. Any man going to work, leaving his shop before 8 o'clock in the morning, shall stand no loss of time if not able to get to work on time, on account of distance or accident.

SEC. 11. No member of the union shall be discharged for refusing to work on a ladder or scaffolding which he considers unsafe, and must be paid for the time taken for inspecting ladder or scaffolding or for enforcing the working rules.

SEC. 12. A sympathetic strike, when ordered by the board of business agents, shall not be a violation of this agreement.

SEC. 13. This agreement shall not take away the power of the business agent of the Painters' District Council to call a strike on any shop for any reason that may appear to the Painters' District Council to be just.

SEC. 14. It is expressly understood that the act of any member of the union shall not be binding on the Painters' District Council unless such act is expressly authorized by said Painters' District Council.

WORKING RULES.

ARTICLE I.

SECTION 1. Every member must carry a working card for the current quarter, and it shall be obligatory that they be ready to show same when called upon.

Members can procure cards before the beginning of the quarter. Men not in possession of the current quarter's working card shall not be permitted to work on the job.

SEC. 2. When two or more men are employed on any job the man in charge must examine the cards and report to the business agent or secretary of the council, within twenty-four hours, by mail or telephone, those not in possession of the regular quarterly working card.

If a man in charge of any job does not enforce this rule he shall be fined not less than five dollars.

SEC. 3. All men in charge of work shall at once notify the secretary of the council, by mail or telephone, when starting a job, provided said job will last more than three (3) days; also all jobs in mills. The council to pay all expenses incurred.

ARTICLE II.

SECTION 1. All members are restrained from reporting at shops before 7.30 a. m. or at jobs before 7.45 a. m.

SEC. 2. No member shall do any work on Saturday between 12 o'clock noon and midnight, unless his employer has special permission in writing from the council. The boss painter to apply for such permit at least 24 hours before granting same, to give business agent time to investigate the job where the permit is wanted.

It shall be obligatory on the part of the man in charge to show said permit to each of the men who are to work on the job; failure to do so he shall be subject to a fine of not less than \$10; failure on the part of the men in not insisting on seeing said permit they shall be each subject to a fine of not less than \$5.

SEC. 3. Members working outside the jurisdiction of the council shall in all cases comply strictly with the laws of the localities to which they are sent; provided that the shorter workday and the higher wage scale shall be demanded in all cases.

Members failing to comply with this rule shall be fined not less than ten (\$10) dollars.

SEC. 4. Any member violating any of the working rules (except those where a fine has been fixed) shall be fined five (\$5) dollars for the first offense and in all cases upon the second or third offenses they shall be dealt with as the council directs.

SEC. 5. Any member preferring charges shall receive the sum of one (\$1) dollar to be paid by the secretary-treasurer of the council on such charges being sustained, regular salaried officers of the council to be excepted from this rule.

SEC. 6. Members are prohibited from working overtime except where there has been a cessation of work for at least an hour after the regular working hours.

ARTICLE III.

SECTION 1. Should any member be taken sick or meet with an accident while at work, it shall be the duty of the man in charge of the work to take him home or see that he is properly cared for and all necessary expense and loss of time shall be defrayed by the Painters' District Council.

SEC. 2. Any member having knowledge of the violation of any of these rules shall notify the business agent or secretary of the council within twenty-four hours; failing to do so he shall be fined not less than \$5.

SEC. 3. Any member transferring or lending his working card to any one shall be fined not less than \$10 or be expelled.

SEC. 4. All fines shall be payable to the secretary of the Painters' District Council within the time stipulated by the council.

SEC. 5. Any member working at the trade on Labor Day shall be fined the sum of \$10 by the Painters' District Council.

AGREEMENT BETWEEN CINCINNATI DAILY NEWSPAPER PUBLISHERS' ASSOCIATION AND CINCINNATI TYPOGRAPHICAL UNION, NO. 3.

This agreement, made and entered into this 29th day of April, 1904, by and between the Cincinnati Daily Newspaper Publishers' Association, representing and authorized to act for the Enquirer Company, the Commercial Tribune Company, the Cincinnati Times-Star Company and the Post Publishing Company, by its Committee, to-wit, Edmund Wisnewski, E. O. Eshelby, C. H. Rembold and Charles F. Mosher, duly authorized to act in its behalf, party of the first part, and the Cincinnati Typographical Union, No. 3, by Harry M. Ogden, A. C. Thoroman, T. J. Donnelly, J. S. Fleming and W. A. Finlay, its Committee, duly authorized by resolution of February 21, 1904, to act in its behalf, party of the second part,

Witnesseth, That from and after April 29, 1904, for the term of five (5) years, ending April 29, 1909, the newspapers represented by said party of the first part bind themselves to the employment of only members of Cincinnati Typographical Union, No. 3.

It is further expressly understood and agreed between the parties hereto that the scale of wages and hours hereby adopted shall remain in full force during the terms of this agreement, subject to the following conditions, namely, that if on the 29th day of April of any year during the term of this agreement either party should desire a change in the wage and hour scale, such change may be made, thirty days previous written notice having been given, and the changed scale of wages and hours shall then remain in force, subject to like changes on each succeeding 29th day of April, and all such changes to be made on the following terms, to-wit, The Cincinnati Typographical Union, No. 3, shall select a committee of two, and the Cincinnati Daily Newspaper Publishers' Association shall select a like committee of two; and should this joint committee be unable to agree upon a scale of wages and hours for the ensuing year, or balance of the term of this agreement, then they shall select some competent man, as arbiter, whose decision shall be binding upon all parties hereto, with the privilege of appeal under the terms of the arbitration agreement as entered into by the International Typographical Union and the American Newspaper Publishers' Association, which agreement shall govern in all disputes that may arise during the life of said national arbitration agreement.

SECTION 1. In offices of parties of the first part to this agreement all work must be time work.

SEC. 2. The following is the alphabetical scale for the measurement of type: Pica to bourgeois, inclusive, 13 ems; brevier and minion, 14; nonpareil, 15; agate, 16; pearl, 17; diamond, 18. All fonts exceeding the standard are to the benefit of the compositor, and no deduction or allowance can be made owing to such excess. In considering whether a font of type is up to the standard, the letters to be measured are the lower case letters from a to z, inclusive, and these only—the twenty-six letters of the alphabet; and the letters c, d, e, i, s, m, n, h, o, u, t, a and r shall be equal to at least one-half of such measurement. Where type shall be cast upon a larger body than the face (as nonpareil face upon minion body), it shall be measured as nonpareil; or where it shall

be cast upon a smaller body than the face (as long primer face upon a bourgeois body), it shall be measured as bourgeois.

SEC. 3. Compositors employed on morning papers shall receive not less than \$26 per week of six days of 48 hours (eight consecutive hours to constitute a day's work), with the exception of a reasonable time for lunch, to be fixed by the foreman and the chapel, the hours to be between 6 p. m. and 4 a. m., except on Saturdays, when the hours shall be between 5.30 p. m. and 3.30 a. m., the time consumed for lunch not to be charged against the office.

SEC. 4. Compositors employed on evening papers shall receive not less than \$23 per week of six days, of 48 hours (eight consecutive hours to constitute a day's work), with the exception of a reasonable time for lunch, to be fixed by the foreman and the chapel, the hours to be between 7.30 a. m. and 6 p. m., except on Fridays, when the hours shall be between 7 a. m. and 6 p. m., the time consumed for lunch not to be charged against the office.

SEC. 5. The minimum wages for foremen on the morning papers are to be \$35 per week; assistant foreman, \$28 per week, and all other weekly hands, \$26 per week.

SEC. 6. The minimum wages for foremen on afternoon papers are to be \$30 per week, and all other weekly hands \$23 per week.

SEC. 7. The number of hours which shall constitute a day's work for employees employed by the week or day, shall be eight hours, and any such employee shall receive for any excess work over eight hours, price and a half. On afternoon papers, a call back for night extra is entitled to \$1 for the call, in addition to the overtime, and a call back for an early morning extra on afternoon papers, \$2 for the call, in addition to the overtime. When employees of morning papers are called back, their time shall be continuous from time of quitting work. Employees called to work on morning papers in the afternoon shall receive not less than two hours' straight work.

SEC. 8. Offices having not less than five machines nor more than twelve, shall employ a machinist; having thirteen machines nor more than twenty-five, a machinist and helper; having twenty-six machines or more, one machinist one assistant machinist and two helpers. The wages of the machinist shall not be less than \$26 per week on morning papers, nor less than \$23 per week on afternoon papers. The wages of the assistant machinist shall not be less than \$22 per week on morning papers. The wages of the machine helpers on morning papers shall not be less than \$17 per week, and on afternoon papers not less than \$14 per week. All overtime shall be arranged for between the office and the machinist, subject to the approval of the union. When but one helper is employed in an office he shall receive \$1 per week above the contract scale.

SEC. 9. In no case can an employee receive less than a day's pay, except in cases where a compositor is discharged, in accordance with causes 1, 2 or 3 of section 19.

SEC. 10. No compositor will be allowed to operate a linotype, type-setting, typesetting or any machine displacing hand composition who is not a member in good standing of Cincinnati Typographical Union, No. 3.

SEC. 11. A morning paper office shall have the privilege of running machines during the day without extra price (save as overtime), provided operators receive a full day's pay.

SEC. 12. Afternoon papers shall have the right to run a separate night force, within the limit of morning paper hours, provided that force so employed shall receive a full day's pay at the night scale.

SEC. 13. Matter set by the machine during the day time can not be used on a morning paper unless paid for at morning newspaper scale.

SEC. 14. Matter set by machine during the night time can not be used on an evening newspaper or other publication unless paid for at the morning newspaper scale.

SEC. 15. Each newspaper office shall be allowed one apprentice for every ten journeymen regularly employed, or major fraction thereof, the limit in no office to exceed three. They shall not be less than sixteen years old at the beginning of their apprenticeship, and shall serve for a term of four years. In order that they may be given full opportunity to become competent workmen, each apprentice shall serve at least two years continuously in the ad. room. The last three months of apprenticeship he shall be employed operating a typesetting machine.

The compensation shall be:

First year. One-fourth of journeyman's wages.

Second year. One-third of journeyman's wages.

Third year. One-half of journeyman's wages.

Fourth year. Two-thirds of journeyman's wages.

The terms of apprentices to expire in successive years—no two of the same year.

SEC. 16. Beginners (by which is meant compositors learning to operate machines), shall be allowed to work at the rate of two dollars and sixty cents (\$2.60) per day on morning papers, and two dollars and ten cents (\$2.10) per day on evening papers, for a period of thirty (30) days, when, having attained a fair average, they shall be paid the regular demand called for in sections 3 and 4 of this agreement.

SEC. 17. The foreman shall supervise and govern all employees within the composing room, and shall have the right to transfer an employee to any position; provided, however, that should a man be so transferred who is not fully competent to perform the duties pertaining to such position, it shall not prejudice the standing of the man in the office. Overtime shall be divided equally, as far as possible, among all employees.

SEC. 18. All employees in the composing room shall be paid in full once every week, the regular day of payment to be named by the employer, but shall be the same day for all employees. A peremptory demand for wages at any other time shall be cause for discharge.

SEC. 19. Foremen of printing offices shall have the right to employ help, and may discharge (1) for incompetency; (2) for neglect of duty; (3) for violation of office rules (which shall be conspicuously posted) or laws of the chapel or union; and (4) to decrease the force, such decrease to be accomplished by discharging first the person or persons last employed, either as regular employees or as extra employees, the exigencies of the matter may require. Should there be an increase in the force within sixty days after a decrease, the person or persons displaced through such cause shall be reinstated in the order in which they were discharged, before other help may be employed. Upon demand, the foreman shall give the reason for discharge in writing. Persons considered capable as substitutes by foreman shall be deemed competent to fill regular situations, and shall be given preference in

filling of vacancies in the regular force. This section shall apply to incoming as well as outgoing foremen. No compositor who has been discharged from an office for causes 1, 2 or 3, shall be eligible to sub, except at the option of the foreman.

SEC. 20. The office is entitled to all cuts or illustrations, either advertising or news, and has the right to set on time, any necessary lines for same. The office is entitled to all other "pick-ups" of any character whatsoever. Matter once paid for shall always remain the property of the office, to use in any or all of its editions, or as many times as desired, with such changes as the office may wish to make. "Kill" marks shall not deprive the office of the right to "pick-ups." *Provided, however,* Local advertisements or portions thereof, shall be set in any office of the party of the first part using same, and if furnished in type, electrotypes, stereotype, matrix or other form, shall be reset by the office within forty-eight hours of the date of publication, as nearly as possible like original advertisement, and the proof read and corrected. Signatures in local advertisements are to be reset once only when first brought into the office. Advertisements of local business houses, or advertisements of railroad companies or corporations of a similar character having local offices, shall be considered local advertisements under this section. An advertisement cut which is excluded from attempted reproduction is one containing no figures or words, or figures and words; and should words or figures, or words and figures, appear on a local advertisement cut, said words or figures, or words and figures, shall be reset, under the workings of this section, in the same space taken by such words or figures, or words and figures, on the cut: *Provided, however,* That matrix of an advertisement, the advertisement having been distributed, can not be used, unless the advertisement is reset within forty-eight hours of the time of publication, office advertisements excepted. A penalty shall be imposed upon the office for not resetting an advertisement within forty-eight hours. The office shall be obliged to reset such advertisement one additional time for each twenty-four hours overlooked in the reproduction of said advertisement.

SEC. 21. The standard of competency for machine composition shall be 28,000 ems per day of eight hours on straight nonpareil news matter as it appears in paper; a reduction of 2,400 ems per day for each increase of one point in size. Alterations from copy are to be "ringed" and corrected by office, and resetting of matter occasioned by defective slugs or matrices shall be done by the office.

SEC. 22. The newspapers shall use no plate reading matter nor matrix reading matter in any of their issues, and Typographical Union, No. 3, shall prohibit the use of such matter in any daily union newspaper office within its jurisdiction.

SEC. 23. The following shall be deemed a definition of what constitutes an alteration from copy: Any change from the copy not provided for by any style of the paper publicly posted in the office, nor by instructions given to the compositor when the copy is given out. Any change in the spelling of proper names, words from foreign languages, etc. Any change in the spelling or division of words not in accordance with the dictionary given as a guide. Any change in punctuation, grammatical construction or capitalization, where a take commences or ends even, within two lines of commencement or end.

SEC. 24. The foreman of each newspaper office shall keep the account of work done by employees, so that each man can collect his own direct from the office.

SEC. 25. A week's work means forty-eight hours' work in six days. Nothing in the foregoing clause is to be construed as preventing one from working seven days or overtime when his services are required, provided he is unable to procure a competent substitute from employing a competent substitute one or more days in any one week.

SEC. 26. On six-day papers (by which is meant offices issuing one or more editions six days of each week), phalanxing shall not be permissible. On seven-day papers (by which is meant offices issuing one or more editions seven days of each week), phalanxing is permissible. No employee of a seven-day paper shall be phalanxed more than one day of each current seven-day week. In offices where phalanxes of each employee must be phalanxed in order, the list being subject to arrangement by the foreman; rearrangement of the list may be made in emergency after consultation between the foreman and the father of the chapel. The phalanxed employee will not be permitted to work in the office in any capacity on the day on which he is phalanxed. A situation on a seven-day paper shall be a seven-day situation.

SEC. 27. It is agreed by the said party of the second part that and in consideration of the covenants entered into and agreed to by the said party of the first part, it shall at all times during the life of this agreement, truly and faithfully discharge the obligations imposed upon it by furnishing men capable of setting the type and operating the machines of the various newspaper offices composing the Cincinnati Daily Newspaper Publishers' Association. Should the Cincinnati Typographical Union, No. 3, be unable at any time to furnish workmen, and other help is called in by the office, such other help shall be displaced by members of the Cincinnati Typographical Union, No. 3, at the end of any day when the union is able to furnish workmen.

SEC. 28. A standing committee of two representatives of the Cincinnati Daily Newspaper Association, and a like committee of two representatives of the Cincinnati Typographical Union, No. 3, shall be selected, and in case of a vacancy, absence, or refusal of either of such representatives to act, another shall be selected in his place, to whom shall be referred all questions which may arise as to the construction or interpretation of any of the clauses of this agreement, or alleged violation thereof, which can not be settled otherwise, and such joint committee shall meet and act when any dispute or difference whatsoever shall have been referred to it for decision by the executive officers of either party to this agreement, and should the joint committee be unable to agree, then it shall refer the matter to a board of arbitration, composed of representatives of each party to this agreement to select one arbitrator and the two to agree upon the third. The decision of this board shall be final and binding upon both parties, subject to the terms of the national arbitration agreement. It is mutually understood and agreed that the expense of said joint committee and board of arbitration shall be borne equally by the two parties to this agreement. In every case of complaint about heat, light, sanitation, or any other local matter made to the father of the chapel, it shall be the duty of the said father of the chapel to thoroughly investigate the cause of the complaint before taking any action whatsoever, and in no case shall he order

man in the composing room to leave their work without a hearing having been given to the office, and then only by the consent of two-thirds of all the men at work in the composing room where the complaint is made. All matter in dispute between foremen and office committeemen or fathers of chapels, shall go to the business committee of Cincinnati Typographical Union, No. 3, for decision before being taken to the standing board, the decision of the business committee to be binding upon both parties until reversed by the standing board: *Provided*, The union shall hold itself responsible for any outlay made on a reversed decision. Any protest against a decision of the business committee must be made within thirty days after the party of the first part has received notification of such decision.

SEC. 29. It is expressly understood and agreed that no ruling or decision based on previous contracts or agreements shall be binding upon any of the parties to this agreement. It is conceded by the publishers that they have no right to object to any rules or regulations made by the union to govern its members, which do not conflict with the terms of this agreement. That all the publishers can demand of the union, or the union of the publishers, is the fulfillment of this contract.

(Signed)

For Cincinnati Daily Newspaper Publishers' Association:

ED. WISNEWSKI,
The Enquirer Company.

E. O. ESHELBY,
The Commercial Tribune Company.

C. H. REMBOLD,
The Cincinnati Times Star Company.

MILTON A. McRAE,
CHAS. F. MOSHER,

The Post Publishing Company.

For Cincinnati Typographical Union, No. 3:

HARRY M. OWSEN,
A. C. THOROMAN,
T. J. DONNELLY,
J. S. FREEMING,
W. A. FISKE.

ILLINOIS CENTRAL RAILROAD COMPANY SCHEDULE OF RULES AND WAGES OF MACHINISTS

Adopted by the Board of Directors, 1904

RULE 1. Any man who has served an apprenticeship of two or three years of varied experience at the machinist's trade, or by his own experience be qualified or capable of fitting together the metal parts of any machine or is competent to do either shaping, boring, turning, finishing and adjusting the metal parts of any machine wheel or axle shall constitute a machinist.

RULE 2. Machinist's work shall be performed by a machinist or apprentice to the machinist's trade, the master mechanic to determine the class of work.

NOTE.—Steam-pipe work and stripping of engines is to be considered machinist's work.

RULE 3. Eliminated.

RULE 4. Applicants for employment as machinists shall on expected to file application as to character and ability, and address relatives.

RULE 5. After commencing work, machinists will not be allowed to leave the premises until the regular hour of closing of work without permission of the foreman in charge, and notice to the timekeeper. Machinists wishing to be absent two or more days must obtain leave of absence from the foreman.

RULE 6. Machinists going on night shift from day shift shall receive overtime rates for the first night after he has been transferred; he shall also receive overtime for the first day after he has been transferred from the night shift.

RULE 7. The rules now in effect compensate machinists going to and from their work when being transferred by the railroad company; the company will not concede time and a half for the first 24 hours to machinists when so transferred.

RULE 8. There may be one apprentice to each shop regardless of the number of journeymen employed, and not to exceed one apprentice to each five journeymen employed additional at each shop.

RULE 9. Applicants for apprenticeship must be between the ages of 16 and 21 years, and must be able to read and write and understand the rudiments of arithmetic.

RULE 10. Graduates of technical colleges who have entered the service of the company prior to the age of 21, may enter the service of the company as special apprentices, the term of service to be two years, and receive the same in discriminating consideration as other apprentices in the third year of actual service.

RULE 11. Regular apprentices shall be indentured for four years and shall not in any case leave the service of the company without good and just cause except, however, they should prove disqualified during the first six months; they may quit during that time, or the company may transfer or dismiss them from the service.

RULE 12. The company shall furnish all opportunities possible to the apprentices to secure a varied and complete experience during their apprenticeship.

RULE 13. No regular apprentice shall be asked to work overtime on night shift during the first three years of his apprenticeship until he has completed a job commenced during the day for running repairs.

RULE 14. It has been the practice, and is the intention of the company, to give preference to applicants for positions of apprentices who are sons or relatives of employees, and this will be continued especially where the boy makes application for apprenticeship to the same trade his father or relative is working at.

RULE 15. Overtime on other than running repairs shall not exceed three nights per week, or two consecutive Sundays for the machinist. Where possible engine-house machinists may so arrange or divide the work that each man may have every other Sunday off.

RULE 16. Regular shop machinists sent out on the road and away from their home station shall receive straight time from the time they are called until returned to home station, and overtime for work

during overtime hours, with allowance of not to exceed \$1 per day of 24 hours for expenses.

RULE 17. When it becomes necessary to reduce expenses, full force of men shall be retained and reduction made in the working hours until the hours shall have reached 8, and then further reduction if not made in hours, shall be made by the dismissal of the last man employed, merit and ability being equal.

RULE 18. Thirty days in the service of the company shall be proof of competency.

RULE 19. Any machinist failing to report for work at the regular hour must first report to the timekeeper and his foreman. He will then commence work at the next half hour.

RULE 20. All time over the regular working time, Sundays and holidays, as follows: New Year's Day, Washington's Birthday, Decoration Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas shall be paid for at the rate of time and one-half.

RULE 21. Any of the holidays named in this schedule falling on Sunday, the day designated by proclamation, or selected by the State or nation instead for celebration, shall be considered a regular holiday.

RULE 22. Machinists called to work overtime where such work shall be 3 hours and 20 minutes or less, shall receive 5 hours' pay.

RULE 23. Nine hours shall constitute a day's work. This rule is held in abeyance.

RULE 24. The rate of pay for competent machinists in the shops of the Illinois Central Railroad system shall be 34 and 35 cents per hour in Chicago; at all other points on the system, 34 cents per hour.

RULE 25. The rate of pay of machinist's apprentices shall be as follows:

	Cents.
First year of service	10½
Second year of service	11½
Third year of service	12½
Fourth year of service	13½

RULE 26. Apprentices having finished their apprenticeship, and being qualified to perform the same work, quality and quantity, as journeymen, shall receive journeyman's pay.

RULE 27. The rate of pay for gang foremen at Chicago shall be thirty-seven and one-half cents per hour. The rate of pay for gang foremen in shops outside of Chicago on the system shall be thirty-six and one-half cents per hour.

RULE 28. The grievance of any employee which he can not adjust with the foreman may be appealed by him to the master mechanic, superintendent, or superintendent of machinery.

RULE 29. Any matter or subject of grievance must be presented for consideration within thirty days after its occurrence, and unless adjusted within a reasonable time may be appealed. All appeals must be in writing.

RULE 30. Machinists who are injured while in the employ of the company are given fair and impartial consideration; in fact, I know of no other road that gives as much consideration.

RULE 31. Machinists having a grievance shall be expected to present same to the foreman before asking the shop committee to act on or take up the matter.

RULE 32. There shall be no discrimination by the company against any person or committee for representing a grievance or acting for others in the adjustment thereof.

RULE 33. Machinists having grievances shall have the right to present same at any time, whether it be off or on duty hours.

RULE 34. The company makes no discrimination relative to transportation for any of its employees, and machinists will receive the same consideration as other shop employees.

RULE 35. These rules shall be enforced one year from June 1, 1904, and thereafter, provided that after the first year changes may be agreed upon by either party giving thirty days' notice to the other of changes desired, for conference.

W. RENSRAW,
Superintendent of Machinery.

Accepted by committee:

WM. FITZ PATRICK
J. C. PEASLEY.
M. J. MELDRUM.
J. C. SLANEY.
D. BAILEY.
H. S. BURKHART.
FRANK CONNOR.
E. J. CONNORS.
F. W. WALTERS.

JOHN LANSBURG.
GEO. W. TAIT.
EDWARD KEATING.
D. B. SALISBURY.
W. H. MOORE.
H. ZIMMERMAN.
C. M. STARKE.
C. Y. KATZENMIER.

Approved:

D. W. RODERICK,
Attorney for Machinists.

AGREEMENT BETWEEN AMUSEMENT SECTION OF THE CENTRAL TRADES AND LABOR UNION OF ST. LOUIS AND EMPLOYERS.

Articles of agreement entered into on the ——— day of ——— 190 , between ——— as party of the first part, and the Amusement Section of the Central Trades and Labor Union of St. Louis and vicinity, as follows:

ARTICLE 1. The party of the first part agrees that in employing ——— for the season of 190 , commencing May 1 and ending April 30, 190 . Only members of the above in good standing in the organizations mentioned above, affiliated with the A. S. of the C. T. and L. U. of St. Louis and vicinity, shall be employed at the rate of wages and other regulations established by the above-named organizations, a copy of each of which is hereunto appended.

ART. 2. The party of the second part agrees to furnish at all times competent and reliable craftsmen, and will stand financially responsible for any loss or dishonesty on the part of any members of the various crafts who are working under this agreement, upon proof of same.

ART. 3. The party of the first part shall have the right to maintain discipline by the discharge of incompetent, careless, disobedient or intemperate employees, and should any controversy arise as to the justness of such action it shall be settled as per section 8 of these articles agreement.

ART. 4. It is guaranteed by the party of the second part that no demands for an increase of wages, shortening of hours of employment, or other demands different from these articles of agreement, shall be made by any of the organizations affiliated with the A. S. of the C. T. and L. U. of St. Louis and vicinity during the life of this agreement.

ART. 5. The party of the first part agrees that in the purchase of supplies only union-made articles shall be purchased, except where such is not practicable.

ART. 6. The party of the second part guarantees that it will not sanction any strike that may take place in any department during the life of this agreement as long as all the provisions of this agreement are adhered to by party of the first part.

ART. 7. The party of the first part shall have the privilege of appearing before the board of directors of the A. S. of the C. T. and L. U. of St. Louis and vicinity in person, or by representative, whenever deemed necessary for a proper presentation of their interests.

ART. 8. All differences that may arise that can not be settled by a conference of the board of directors and the employer, or their representative, shall be submitted to a board of arbitration of five, said board to be comprised of two members of the board of directors of the A. S. of the C. T. and L. U., two persons to be selected by the party of the first part, the above four to choose the fifth member of the board. The decision of the majority of the board as constituted shall be binding on both parties to this agreement.

This agreement to be in force from _____ until _____.

Signature of the party of the first part,

_____.
_____.
_____.

Signature of the party of the second part,

_____,
_____,
_____,
_____,
_____.

Committee.

RECENT REPORTS OF STATE BUREAUS OF LABOR STATISTICS. **ILLINOIS.**

Twelfth Biennial Report of the Bureau of Labor Statistics of the State of Illinois. 1902. David Ross, Secretary of Board of Commissioners of Labor. viii, 609 pp.

Four subjects, as follows, are presented in this report: Manufactures, 280 pages; trade and labor unions, 203 pages; strikes and lockouts, 49 pages; population of State, 75 pages.

MANUFACTURES.—Under this head is presented a series of tables giving, for the years 1900 and 1901, returns from 767 identical establishments, representing 55 industries. In the statement following the statistics for the two years are summarized:

STATISTICS OF MANUFACTURES FOR 767 IDENTICAL ESTABLISHMENTS, 1900 AND 1901.

Items.	1900.	1901.	Increase.	
			Amount.	Percent.
Establishments	767	767	-----	-----
Private firms.....	253	243	a 10	a 3.96
Corporations.....	514	524	10	1.95
Partners.....	439	422	a 17	a 3.87
Stockholders.....	39,632	43,081	3,449	8.70
Capital invested.....	\$68,908,412	\$77,777,912	\$8,869,500	12.87
Stock used.....	\$131,685,948	\$153,071,744	\$21,985,796	16.77
Value of goods made or work done.....	\$199,589,291	\$227,229,864	\$27,640,573	13.85
Greatest number of persons employed (b) ..	89,165	94,171	5,006	5.61
Average number of persons employed.....	75,968	80,881	4,913	6.47
Males.....	65,730	70,122	4,392	6.68
Females.....	10,238	10,759	521	5.09
Total wages paid.....	\$37,547,360	\$40,887,741	\$3,340,381	8.90
Average yearly earnings.....	c \$494.25	c \$505.53	\$11.28	2.28
Average days in operation.....	288	292	4	1.39

a Decrease.

b Obtained from the number appearing on the pay roll of each establishment for one particular week each year, mainly taken from the month in which the greatest number is employed.

c Based on total wages paid and average number of persons employed.

A separate presentation of data for establishments owned by private firms and by corporations makes it possible to present the following comparative statistics:

CAPITAL INVESTED, VALUE OF PRODUCT, NUMBER OF EMPLOYEES, AND WAGES PAID BY PRIVATE FIRMS AND BY CORPORATIONS, 1900 AND 1901.

Items.	1900.		1901.	
	Private firms.	Corporations.	Private firms.	Corporations.
Number of establishments.....	253	514	243	524
Per cent of establishments in each class.....	32.99	67.01	31.68	68.32
Capital invested.....	\$9,757,630	\$59,150,782	\$9,951,103	\$67,826,809
Per cent of capital in each class.....	14.16	85.84	12.79	87.21
Average capital per establishment.....	\$38,568	\$115,079	\$40,951	\$129,440
Total product.....	\$23,573,637	\$176,015,661	\$24,660,861	\$202,569,003
Per cent of product by each class.....	11.81	88.19	10.85	89.15
Average product per establishment.....	\$93,176	\$342,443	\$101,485	\$386,582
Number of employees.....	12,709	63,259	12,790	68,091
Per cent of employees in each class.....	16.73	83.27	15.81	84.19
Average employees per establishment.....	50.23	123.07	52.63	129.94
Wages paid.....	\$5,325,160	\$31,573,795	\$5,691,835	\$35,023,299
Per cent of wages paid by each class.....	14.43	85.57	13.98	86.02
Average yearly earnings per employee.....	\$419.01	\$499.12	\$445.02	\$514.36

From the above table it appears that corporation management is steadily encroaching upon the firm or individual method of doing business. The movement is uniform in respect to all the items shown.

The following table shows, by sex, the weekly earnings of employees in the 767 identical establishments for 1900 and 1901. The summary is for the greatest number of persons employed during the two years:

CLASSIFIED WEEKLY EARNINGS OF EMPLOYEES IN 767 IDENTICAL ESTABLISHMENTS, 1900 AND 1901.

Weekly earnings.	1900.					1901.				
	Total.	Males.		Females.		Total.	Males.		Females.	
		Num-ber.	Per-cent.	Num-ber.	Per-cent.		Num-ber.	Per-cent.	Num-ber.	Per-cent.
Under \$5.....	8,400	4,449	5.78	3,951	32.43	8,888	4,560	5.63	4,328	32.94
\$5 or under \$6.....	4,946	2,669	3.47	2,277	18.69	4,826	2,502	3.09	2,324	17.69
\$6 or under \$7.....	5,868	3,628	4.71	2,240	18.38	6,093	3,730	4.60	2,363	17.98
\$7 or under \$8.....	7,846	6,436	8.36	1,409	11.56	7,618	6,297	7.77	1,351	10.28
\$8 or under \$9.....	6,885	6,097	7.92	788	6.47	7,597	6,469	7.98	1,128	8.59
\$9 or under \$10.....	13,910	13,335	17.32	574	4.71	14,856	14,132	17.44	724	5.51
\$10 or under \$12.....	13,093	12,576	16.34	517	4.24	13,962	13,472	16.63	490	3.65
\$12 or under \$15.....	13,402	13,102	17.02	300	2.46	14,015	13,706	16.92	309	2.35
\$15 or under \$20.....	10,183	10,080	13.09	103	.85	11,418	11,314	13.96	104	.79
\$20 or over.....	4,633	4,608	6.99	25	.21	4,878	4,819	6.98	29	.22
Total.....	89,165	76,981	100.00	12,184	100.00	91,171	81,031	100.00	10,140	100.00

In 1900 it is seen that the earnings of 49,094 males, or 63.77 per cent of the total, were from \$9 to \$20 per week, while in 1901 the same range of earnings was received by 52,624 males, or 64.95 per cent of the total. On the other hand, in 1900 the earnings of 9,877 females, or 81.06 per cent of the total, were under \$8 per week, while in 1901 the same range of earnings was received by 10,366 females, or 78.89 per cent of the total.

TRADE AND LABOR UNIONS.—Detailed statistics from 592 labor organizations (298 located in Chicago and 294 in other cities of the State), covering the years 1897 and 1901, are presented in this part of the report. The subject is introduced by a table showing the progress made by trade and labor unions in the State during the 50-year period 1852 to 1901. During the last five years of this period 339 unions, or 58.96 per cent of the number reporting year of organization (575), were organized, and in 1901 these unions reported a membership of 70,368, or 50 per cent of the membership of the whole number of unions (592). The membership of all unions in 1901 was 140,733 persons, of whom 131,969 were employed. The apprentices employed during the year numbered 6,842.

Increases in wages in 1901 over wages in 1897 affected 45,717 members, and 178 unions reported decreases in the number of working hours during the five years, 1897 to 1901, affecting 36,513 members. The average decrease in working time in 1901 was 1.57 hours, and for the five years 1.55 hours. Over 50 per cent of the number considered received a reduction of 2 hours. Of the total membership of 140,733

reported for 1901, 38,587 worked 8 hours per day, 8,275 worked 8½ hours, 21,569 worked 9 hours, 20,973 worked 9 to 12 hours, 31,502 worked 10 hours, 12,089 worked 12 hours, 876 worked 13 hours, and the hours of 6,862 were not reported.

Of the 592 unions, 580 reported on the subject of agreements between the unions and the employers. Of the latter, 498 had agreements affecting 125,239 members. Of 587 unions reporting as belonging or not belonging to a central body in the city where located, 406 reported as belonging to a central body. Of 550 unions having a parent body, 138 reported a national parent body and 412 an international. Out of 488 unions reporting as to local affiliations, 486 were with the parent body and two were not; 445 unions reported as being affiliated with the American Federation, 54 with State federations, and 58 with both the American and State federations.

In 1901, as to benefits paid to members and contributions, 114 unions reported an average of \$300 paid for sickness, 64 unions an average of \$239 paid for accidents, 167 unions an average of \$252 paid for funerals, and 209 contributed an average of \$250 to other unions of the same trade or industry. There was contributed by 293 unions to unions of other trades the sum of \$35,218. As reported by 568 unions, the average cost per member to maintain the local unions was \$7.06 in 1901. There were 142 unions which reported having the insurance feature in their organizations, and of these 112 had 26,459 members carrying insurance in amounts ranging from \$25 to \$5,000.

STRIKES AND LOCKOUTS.—This is a presentation of the statistics of strikes and lockouts in Illinois for the twenty years, 1881 to 1900, and consists of a reproduction of data from the Sixteenth Annual Report of the United States Commissioner of Labor.

POPULATION OF STATE.—Under this head are presented statistics of the population of Illinois, reproduced from the returns of the Twelfth United States Census.

INDIANA.

Ninth Biennial Report of the Department of Statistics, for 1901 and 1902. Benjamin F. Johnson, Chief of Bureau. 891 pp.

This report is made up of six parts, as follows: Census of Indiana, 32 pages; industrial and labor statistics, 77 pages; social statistics, 205 pages; agricultural statistics, 62 pages; economic statistics, 417 pages; railroad statistics, 53 pages.

INDUSTRIAL AND LABOR STATISTICS.—The subjects considered in this part of the report relate to manufactures, coal mining, stone quarrying, economic statistics of wage-earners, and labor disputes.

For the year 1901 reports were received from 1,875 manufacturing establishments, of which 660 were incorporated and 1,215 unincorpo-

rated. The total capital invested in these 1,875 concerns amounted to \$67,423,589 and the output for the year to \$217,293,021. There was paid for materials the sum of \$124,356,436, and for wages and salaries \$43,244,129. Of this latter \$38,376,132 was paid to 101,113 wage-earners and \$4,867,997 to 4,580 salaried officers or employees. The average daily wages for skilled labor was \$2.27; for unskilled, \$1.29; for boys, \$0.69; for women and girls, \$0.87. An increase of business over the previous year was reported by 767 establishments, the average increase being 20.49 per cent, while 129 establishments reported a decrease, the average being 23.33 per cent. This leaves a net average increase for the 896 establishments of 14.18 per cent. A net increase in wages of 9.64 per cent was reported from 588 establishments.

Comparative statistics for 1898 and 1901 for ten selected industries are shown in the statement following:

COMPARATIVE STATISTICS FOR 10 SELECTED INDUSTRIES, 1898 AND 1901.

Industry.	Establishments.		Employees.		Wages paid.	
	1898.	1901.	1898.	1901.	1898.	1901.
Beef and pork products.....	8	10	2,980	3,576	\$1,376,037	\$1,649,936
Brewing.....	7	10	388	665	312,307	391,871
Engines, boilers, tanks, and machinery..	76	83	4,388	4,757	1,781,905	3,015,872
Farming implements.....	21	33	3,019	5,360	1,404,784	2,369,989
Furniture.....	97	101	6,125	8,056	1,849,820	2,883,026
Glass.....	63	49	11,575	10,984	4,390,497	5,673,304
Planing mills.....	84	82	1,551	1,479	588,813	629,229
Strawboard, paper, etc.....	30	40	1,822	1,887	677,109	655,574
Tin plate.....	5	6	2,774	2,967	1,342,874	1,620,961
Vehicles (other than automobiles and bicycles).....	106	117	7,320	8,494	2,662,661	3,084,058
Total.....	497	531	41,942	48,225	16,386,807	21,973,820

Each of the 10 industries shows an increase in the total paid for wages, except strawboard, etc., which shows a decrease. The falling off in the number of glass-making establishments is accounted for by the consolidation of several of them. The increase in capital invested in 1901 over that in 1898 amounted to \$14,428,144, or nearly 60 per cent, while the increase in value of product for 1901 over that for 1898 amounted to \$35,150,311, or more than 40 per cent.

In 1901 in 12 railroad shops reporting there were employed 6,386 workmen and 221 salaried employees, to whom was paid \$2,988,696 in wages and \$211,791 in salaries. During the same year 680 establishments, engaged in making finished products from wood grown in the State, employed 29,835 work people, to whom was paid \$11,227,751 in wages; 304 establishments, engaged in the manufacture of food products, employed 10,957 work people, to whom was paid \$3,150,902 in wages, and 158 establishments, engaged in the manufacture of clay products, employed 2,165 work people, to whom was paid \$601,127 in wages. In stone products of different forms, 49 establishments made returns as employing 2,844 persons and 47 as paying \$855,548 in wages during the year.

Under the presentation of economic statistics of wage-earners the results of interviews with 3,462 persons, employed in 24 industries, are shown. Of the total interviewed, 1,948, or 56.3 per cent, were married, and of these 813, or 41.7 per cent, owned their homes. In the cases of 2,565, or 74.1 per cent, wages were not changed during the year; 837, or 24.2 per cent, had an increase of wages, and 60, or 1.7 per cent, suffered a reduction. Only 606, or 17.5 per cent, reported savings from their wages. In the matter of insurance, 1,230 reported carrying life policies and 93 accident policies. As to nativity, 293 were foreign born, 2,169 native born, and the remainder not reporting as to nativity. Of the wage-earners, 3 per cent were under 16 years of age, 64 per cent between 16 and 35, 24 per cent between 35 and 50, and 9 per cent over 50. In addition to the above, 1,024 coal mine employees were interviewed. Of these 879 were native born, and 145 foreign born. Daily wages averaged \$2.44 for the 551 miners who reported on this item, and 151 reported savings aggregating \$19,973, or an average of \$132.27. Of the total mine employees, 692 were married, and of these 314 owned their homes. A number reported owning shares in building and loan associations, while others reported carrying life and accident insurance.

During the period from January 25, 1901, to May 17, 1902, there occurred 39 labor disputes, affecting 158 establishments, and involving, approximately, 7,650 employees directly and 24,170 indirectly. A large majority of the disputes were adjusted through the efforts of the State board of labor commissioners.

AGRICULTURAL STATISTICS.—Statistics are given by counties, showing for 1901 and 1902 the acreage and quantity of the chief agricultural products; also comparative tables showing the quantity produced for a series of years. The average wages paid for farm labor, including board, in 1901, varied, in the several counties, from \$10.17 to \$18.68 per month, and in 1902 from \$12.34 to \$19 per month.

RAILROAD STATISTICS.—Tables are given showing for each road operating in the State for the years ending June 30, 1901, and June 30, 1902, the earnings, operating expenses, and maintenance, passengers carried, freight tonnage, average passenger and freight rates, number of officials and employees, salaries and wages, hours of labor per day, days employed per year, and accidents.

IOWA.

Tenth Biennial Report of the Bureau of Labor Statistics for the State of Iowa. 1901, 1902. Edward D. Brigham, Commissioner. 608 pp.

The subjects following are presented in this report: History and purpose of the Bureau of Labor Statistics, 5 pages; factory inspection, 79 pages; graded wages and salaries, 39 pages; new industries, 66 pages; trade unions, 181 pages; employers' reports, 67 pages;

immigration, 12 pages; wage-earners, 46 pages; railroad employees, 19 pages; manual training, 21 pages; some phases of the labor question, 8 pages; directory of Iowa employers, 46 pages.

GRADED WAGES AND SALARIES.—This is a compilation showing, by industries and occupations, the maximum, medium, and minimum wages paid per hour, day, week, month, or year in 18 counties of the State. The number of hours worked per day and per week, together with the sex employed, are also shown.

NEW INDUSTRIES.—To this subject there are four parts: The first shows, by counties, the increase since 1900 in business houses and manufacturing establishments; the second, the new mercantile and manufacturing establishments desired in each locality, together with the advantages and inducements offered for their location; the third, an analysis of the totals furnished by the Twelfth United States Census of the 35 leading manufacturing and mechanical industries of the State, located in the 18 counties having the largest industrial development; and the fourth a report on the unused and undeveloped water powers of the State.

TRADE UNIONS.—The number of local unions in the State reported as holding charters in 1902 was 830, an increase of 434 over the number reported for 1900; the number of national and international organizations reported as having representation in the State was 65, an increase of 17 over the number reported for 1900. Reports were received from 762 out of the 830 locals, giving a total membership of 44,722, or an increase of 18,654 over the number reported for 1900. The 44,722 members were distributed among 6 industries as follows: Building trades, 5,692 members; domestic and personal service, 2,446 members; manufactures, 11,138 members; mercantile, 3,087 members; mines and mining, 12,499 members; transportation, 9,860 members.

Of the advantages gained by trade unions without strikes or lock-outs 90 reported increase of wages, reduction of hours of labor, improved conditions, recognition of union, etc. The chapter closes with the reproductions of 67 wage scales and trade agreements between employers and employees in Iowa.

EMPLOYERS' REPORTS.—Under this head are presented, by counties and industries, for the year 1902, returns from 1,627 establishments, giving number of employees, hours worked per day, weeks in operation, total wages paid, and increase or decrease of wages during the year. The average number of employees reported for the year was 62,299—47,857 adult males, 11,812 adult females, and 2,630 children under 16 years of age—or 38 to an establishment. The average length of the working day for women and children was 9½ hours. During the year an aggregate of \$26,660,004 was paid in wages. The average annual earnings of men was \$501.91, of women \$241.40, and of children \$122.85. The aggregate increase in business for 1902

approximated \$11,000,000. Employers reported 60 strikes as taking place during the year.

WAGE-EARNERS.—Data furnished by 395 individual wage-earners of the State engaged in 57 occupations relating to wages, hours of labor, savings, conditions of employment, insurance, ownership of home, etc., are presented in this chapter. The total wages earned during 1901 by 337 wage-earners who reported was \$223,142, or an average of \$662.14 for each. Savings for the year amounted to \$26,215 by the 138 persons who reported, or an average of \$189.96 for each. Life insurance averaging \$1,905 per individual was carried by 236 wage-earners, and 137 carried fire insurance on their homes to the extent of \$113,750, or an average of \$830 for each. Home owners numbered 133, of whom 74 valued their property at \$116,150, or an average of \$1,570 all being unencumbered, while 59 reported an equity of \$55,030 in property valued at \$96,300.

RAILROAD EMPLOYEES.—This is an investigation of the conditions surrounding the employment of railroad men in the transportation branch of the service, and a record of the accidents to railroad employees within the State for a period of about 32 months from January 1, 1901. During this period there were 86 accidents reported, 66 of which resulted fatally. This is not considered as a complete record of all accidents to railroad employees in the State during the time covered.

Returns from railway employees show that the average run per month was 3,408 miles for conductors; 3,058 miles for engineers; 2,933 miles for firemen, and 3,097 miles for trainmen. On the above mileage basis the average maximum annual earnings of conductors reporting at the maximum rate of \$3.45 per 100 miles was \$1,410, the average minimum annual earnings on the same mileage basis at the minimum rate of \$3 per 100 miles was \$1,224; the average maximum annual earnings of engineers on the mileage basis of those reporting at the maximum rate of \$4.50 per 100 miles was \$1,650, the average minimum annual earnings on the same mileage basis at the minimum rate of \$3.50 per 100 miles was \$1,283; the average maximum annual earnings of firemen on the mileage basis of those reporting at the maximum rate of \$2.50 per 100 miles was \$880, the average minimum annual earnings on the same mileage basis at the minimum rate of \$2.25 per 100 miles was \$790; the average maximum annual earnings of trainmen on the mileage basis of those reporting at the maximum rate of \$2.20 per 100 miles was \$817, the average minimum annual earnings on the same mileage basis at the minimum rate of \$2 per 100 miles was \$743.

KANSAS.

First Biennial Report of the Bureau of Labor and Industry, for 1901 and 1902. W. L. A. Johnson, Commissioner. iv, 472 pp.

Since its organization in 1885 the Kansas bureau has issued 16 annual reports; but the legislature of 1901 provided for biennial reports, the first of which is the present one. The contents of this report may be grouped as follows: Statistics of wage-earners, 198 pages; wages of railway employees, 10 pages; labor organizations, 31 pages; factory inspection, 22 pages; brick, tile, and cement industry, 28 pages; lead and zinc industry, 6 pages; oil and gas industry, 28 pages; railway shop construction and repair work, 18 pages; foundries and machine shops, 15 pages; strikes and labor difficulties, 35 pages; enforcement of labor laws, etc., 18 pages; proceedings of the fifth annual convention of the State Society of Labor and Industry, 46 pages.

STATISTICS OF WAGE-EARNERS.—This is an investigation of the industrial condition of the wage-earners of the State, showing earnings, cost of living, savings, investments, value of homes, incumbrances, etc. The returns cover 468 reports for the year 1901 and 334 for 1902, and embrace railway employees in train service and in railway trades other than train service, and employees in building and in miscellaneous trades. For the year 1901 the average total income of wage-earners from all sources was \$701.37; for 1902 it was \$741.62. The average cost of living of wage-earners in 1901 was \$637; the average cost in 1902 was \$658.61.

WAGES OF RAILWAY EMPLOYEES.—Salaries and wages paid employees of the largest railway companies operating within the State are presented under this head. During 1901 an aggregate of \$12,273,045.73 in salaries and wages was paid to 20,446 employees. Excluding officials and clerks, the highest average yearly earnings were received by locomotive engineers, namely, \$1,254.42, and the lowest by boiler-makers' apprentices, namely, \$253.40. During 1902 an aggregate of \$12,894,194.69 in salaries and wages was paid to 21,665 employees, and, excluding officials and clerks, the highest average yearly earnings were received by locomotive engineers, namely, \$1,244.75, and the lowest by trackmen, namely, \$345.20.

LABOR ORGANIZATIONS.—This chapter presents reports from 146 organizations in 1901 and 127 in 1902 relating to membership, occupations, conditions of employment, wages, hours of labor, strikes, accidents, etc. On December 31, 1901, 134 organizations reported a total membership of 8,649, and on December 31, 1902, 116 organizations a total membership of 7,715. The average hours of labor per day in 1901, for 124 organizations reporting, were 9.6, and in 1902, for 117 organizations reporting, were 9.3. The annual cost per member for

maintaining union, aside from insurance, was \$6.73 in 1901 for the 139 organizations reporting, and in 1902 it was \$7.23 for the 109 organizations reporting. In 1901, 19 organizations engaged in 36 strikes, and in 1902, 11 organizations engaged in 12 strikes.

BRICK, TILE, AND CEMENT INDUSTRY.—This is an investigation in 1901 and 1902 of the manufacture of brick, tile, and cement; and in addition to a textual discussion of the subject there are tables showing capital invested, value of product, capacity of plants, number of employees, salaries and wages, hours of labor, etc. In 1901 the average daily wages of unskilled labor was \$1.45, and of skilled labor \$2.15; in 1902 the average daily wages of unskilled labor was \$1.53, and of skilled labor \$2.38.

LEAD AND ZINC INDUSTRY.—In 1901 the output of the State was 92,707,854 pounds of zinc, valued at \$1,111,849, and 13,159,896 pounds of lead, valued at \$302,099; in 1902 the output of the State was 69,859,410 pounds of zinc, valued at \$1,013,662, and 8,659,190 pounds of lead, valued at \$202,770. For a shift of ten hours, wages ranged from \$1.50 to \$3.50 for various kinds of labor.

OIL AND GAS INDUSTRY.—This industry is one of the recent developments of the State, and in addition to a scientific and historic treatment of it, tables are given showing capital invested, acres of oil and gas territory owned and leased, number of wells drilled, capacity of wells, output for 1902, and other information.

RAILWAY SHOP CONSTRUCTION AND REPAIR WORK.—This part of the report is devoted to an investigation of the various railway repair and construction shops of the State. Tables are given showing number built, and cost of construction and repairs, of locomotives and cars, number of employees, days worked per annum, and average daily wages. In 1901, out of a total of 40 shops, 27 reported the employment of 4,711 workmen, and in 1902, out of a total of 23 shops, 21 reported the employment of 3,567 workmen.

FOUNDRIES AND MACHINE SHOPS.—In 1901 reports were received from 64 establishments and in 1902 from 21, showing capital invested, number of employees, hours of labor, salaries and wages, etc. For those reporting in 1901 the average daily wages for skilled labor were \$2.37 and for unskilled \$1.39, while the average hours of labor were 9.6 per day for each class. For those reporting in 1902 the average daily wages for skilled labor were \$2.43 and for unskilled \$1.33, while the average hours of labor were 9.7 per day for each class.

STRIKES AND LABOR DIFFICULTIES.—Text accounts are given of the more important difficulties occurring in the State during the year ending May 1, 1903. These were 17 in number and less than 2,500 working people were engaged in them. There were 8 strikes for increase of wages, of which 5 were successful; 7 for increase of wages

and contracts with employers, of which 4 were successful; and 2 for increase of wages and reinstatement of discharged employees, the results of which are not stated.

ENFORCEMENT OF LABOR LAWS, ETC.—Under this head are given court decisions, opinions of the attorney-general of the State, brief accounts of cases arising under the laws of the State relating to labor, and recent labor laws.

MISSOURI.

Twenty-fifth Annual Report of the Bureau of Labor Statistics and Inspection of the State of Missouri, for the year ending November 5, 1903. William Anderson, Commissioner. 422 pp.

The subjects treated in this report are the following: Industrial statistics, 60 pages; statistics of manufactures, 191 pages; labor organizations, 96 pages; free employment offices, 8 pages; Government lands in Missouri, 3 pages; cost of living, 5 pages; agreements between employers and employees, 34 pages; court decisions affecting labor, 14 pages.

INDUSTRIAL STATISTICS.—Under this head are given for each county of the State the surplus products shipped in 1902, together with the aggregate values of the same.

STATISTICS OF MANUFACTURES.—Returns covering 65 manufacturing industries show for 1902 a total capital invested of \$103,218,459, a total value of materials used of \$168,116,126, and a total value of products of \$270,456,232. There were employed during the year 87,282 males and 21,855 females, and there was paid out in wages a total of \$49,560,772. The number of days in operation during the year averaged 281. Detailed statements show, by occupations, for each industry, the number of males and females employed, the average daily wages, the hours of labor per day, and the advance in wages in 1902 over 1901.

LABOR ORGANIZATIONS.—This part of the report presents statistics for 1902, relative to the 636 labor organizations of the State. The membership of the organizations was 76,608 males and 2,835 females, a total of 79,443, or an increase over 1901 of 28,852. Of the total adult wage-earners employed in the various trades represented, 80.56 per cent were organized. The average number of hours constituting a day's work in 1902 was 9.26 as compared with 9.50 in 1901, while the average minimum wage per hour in 1902 was 27.77 cents as compared with 25.39 cents in 1901. During 1902 the average number of days employed was 278. On out of work, sick, death, strike, and accident benefits the organizations expended \$185,081.56. Out of work benefits were paid by 31 organizations, strike benefits by 189, sick and accident benefits by 157, and death benefits by 182. There were 159 strikes and lockouts during the year, of which 110 were settled satisfactorily to the unions involved, 25 were compromised,

and 24 were lost. The number of persons involved was 30,049, and the amount expended by the organizations in support of the strikes was \$45,711.10. Wages aggregating \$142,844.35 were lost to members through strikes during the year. Increase of wages during the year was reported by 70 organizations, reduction of hours of labor by 34. Appeals for arbitration were made in 70 instances, resulting in 59 disputes being settled by that method. The unions reported 1,497 accidents during 1902, of which 144 were fatal.

FREE EMPLOYMENT OFFICES.—Returns from the free employment offices, located in St. Louis, Kansas City, and St. Joseph, for the year ending September 30, 1903, show the following summarized results:

STATISTICS OF THE ST. LOUIS, KANSAS CITY, AND ST. JOSEPH FREE EMPLOYMENT OFFICES, FOR THE YEAR ENDING SEPTEMBER 30, 1903.

Kind of application.	St. Louis.		Kansas City.		St. Joseph.	
	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.
Applications for employment.....	7,688	512	5,507	850	1,689	383
Number filled.....	4,418	434	4,225	431	1,249	279
Applications for help.....	5,119	1,358	11,710	2,939	5,411	566
Number filled.....	4,418.	434	4,225	431	1,249	279

The total applications for employment in the above cities for the year ending September 30, 1903, numbered 16,629 as compared with 11,642 for the previous year, while the number of persons provided with employment was 11,036 as compared with 7,263 for the previous year. The applications for help for the year ending September 30, 1903, numbered 27,103 as compared with 15,944 for the previous year. During the period from June 25 to July 20, 1903, the Kansas City office sent to the wheat fields of Kansas 2,142 harvest hands.

COST OF LIVING, AGREEMENTS BETWEEN EMPLOYERS AND EMPLOYEES, AND COURT DECISIONS AFFECTING LABOR.—The matter presented under these captions consists of reprints from bulletins of the United States Bureau of Labor.

NEW JERSEY.

Twenty-fifth Annual Report of the Bureau of Statistics of Labor and Industries, of New Jersey, for the year ending October 31, 1902.
William Stainsby, Chief. v, 503 pp.

The subjects presented in this report are: Statistics of manufactures, 155 pages; steam railroads, 11 pages; fruit and vegetable canning, 11 pages; economic condition of the building trades, 20 pages; the problem of the unemployed, 45 pages; cost of living, 21 pages; population of the State, 9 pages; the oyster industry, 66 pages; diseases and disease tendencies of occupations, 22 pages; cooperative societies, 5 pages; labor chronology, 104 pages; decisions of courts, 7 pages.

STATISTICS OF MANUFACTURES.—This presentation of the statistics

of manufactures is based on returns secured for each of the years 1900 and 1901 from identical establishments, 1,610 representing 84 specified industries, and 50 classed as miscellaneous. The facts are grouped in twenty tables, which show management of establishments, capital invested, value of materials and of products, number of employees, wages and earnings, daily hours of labor, days establishments were in operation each year, proportion of business done, and a special presentation of the foregoing facts for nine principal industries. Additional tables show for 1901 the aggregate quantities of specified articles of stock used, with their aggregate cost value, and the aggregate quantities of specified articles of goods made, with their aggregate selling value.

In 1900, of the 1,660 establishments reporting, 1,659 reported the aggregate capital invested at \$264,474,031; 1,655 the value of materials used at \$243,339,385, and 1,656 the value of products at \$408,406,834; in 1901, of the total establishments reporting, 1,659 reported the aggregate capital invested at \$284,332,492; 1,654 the value of materials used at \$257,258,761, and 1,656 the value of products at \$437,422,888. The average number of persons employed in 1,659 establishments was 174,883 in 1900 and in 1,660 establishments 191,307 in 1901. A total of \$77,333,138 was paid in wages during 1900 and of \$85,450,085 during 1901, while the average yearly earnings per employee were \$442.19 in 1900 and \$446.66 in 1901. For the total establishments considered, the average number of days in operation was 288.20 for 1900 and 289.37 for 1901, the average number of hours worked per day 9.64 in 1900 and 9.66 in 1901, and the average proportion of business done of the total capacity of all the establishments was 76.24 in 1900 and 77.46 in 1901.

The following table presents data relative to average time and average earnings in the 20 leading industries:

TIME AND EARNINGS IN 20 INDUSTRIES, 1900 AND 1901.

Industry.	Estab-lish-ments.	Hours work- ed per day.		Days in opera- tion.		Yearly earn- ings.		Aggregate wages paid.	
		1900.	1901.	1900.	1901.	1900.	1901.	1900.	1901.
Brewery products.....	32	9.86	9.86	307.89	306.50	\$822.35	\$817.62	\$1,454,746	\$1,516,690
Brick and terra cotta.....	58	9.61	9.70	218.92	232.50	402.37	406.14	1,879,461	2,100,540
Chemical products.....	40	9.63	9.75	313.12	313.58	490.89	474.08	1,857,662	2,057,526
Cotton goods.....	39	9.73	9.67	280.35	287.44	278.54	271.72	1,379,035	1,556,961
Electrical appliances.....	20	9.82	9.95	303.12	294.85	521.69	536.16	1,266,937	1,649,575
Foundries (iron).....	30	9.77	9.80	289.20	292.53	531.18	520.58	2,102,424	2,214,015
Glass (window and bottle).....	19	8.86	8.95	251.67	242.73	500.85	491.64	2,721,121	2,751,202
Hats (felt and wool).....	48	9.10	9.10	269.10	271.71	508.95	523.60	2,694,423	2,961,505
Jewelry.....	66	9.60	9.60	289.92	289.62	562.34	580.13	1,288,887	1,448,016
Leather.....	55	9.79	9.84	299.96	291.32	467.77	489.32	1,926,558	2,375,717
Machinery.....	92	9.79	9.70	298.55	293.77	586.10	574.36	6,930,582	7,567,744
Oils.....	15	9.27	9.33	282.87	297.33	601.44	619.54	1,576,380	1,626,297
Pottery.....	31	9.55	9.55	301.51	305.54	555.18	570.23	1,929,796	2,058,531
Rubber products.....	30	9.26	9.93	285.39	287.33	451.16	456.93	1,811,521	1,961,890
Shoes.....	40	9.64	9.65	277.48	274.73	376.28	367.47	1,691,372	1,689,361
Shirts.....	22	9.56	9.50	286.44	265.95	258.56	274.54	922,724	841,538
Silk (broad and ribbon).....	103	9.72	9.87	289.81	288.40	379.49	391.06	7,681,001	8,130,926
Silk dyeing.....	20	9.68	9.60	293.50	298.25	452.38	459.72	1,502,821	1,638,889
Structural steel and iron.....	16	9.63	9.38	291.81	303.63	506.04	511.12	1,499,991	1,537,959
Woolen and worsted goods.....	26	9.92	10.00	283.72	284.50	324.53	334.25	2,356,101	2,522,623

The table following presents, by sex, the total number of persons employed in 1901 and 1902 in all industries (1,000 establishments) at the specified weekly rates of wages:

EMPLOYED IN ALL INDUSTRIES (1,000 ESTABLISHMENTS) RECEIVING CLASSIFIED WEEKLY RATES OF WAGES BY SEX 1901 AND 1902.

CLASS OF WORK	1901			1902		
	Males	Females	Total	Males	Females	Total
Under \$1.00	17,321	14,470	31,791	15,794	20,976	36,770
\$1.00 and \$1.49	8,228	7,328	15,556	8,748	19,755	28,503
\$1.50 and \$1.99	4,716	4,220	8,936	4,969	7,819	12,788
\$2.00 and \$2.49	14,442	4,788	19,230	14,515	5,964	20,479
\$2.50 and \$2.99	12,141	3,870	16,011	15,769	3,579	19,348
\$3.00 and \$3.49	19,276	2,424	21,700	20,281	2,620	22,901
\$3.50 and \$3.99	18,277	2,114	20,391	21,734	2,406	24,140
\$4.00 and \$4.49	20,664	1,551	22,215	20,377	1,383	21,760
\$4.50 and \$4.99	24,628	1,129	25,757	20,165	400	20,565
\$5.00 and over	4,761	26	4,787	9,556	45	9,601
Total	119,428	47,726	167,154	156,641	55,767	212,408

STEAM RAILROADS.—For the year ending June 30, 1902, the seven railroads in the State employed 34,800 persons for an average of 292 days per person, each working an average of 10.5 hours per day. The total paid in wages amounted to \$19,087,158, the average wages per day being \$1.87, and the yearly earnings \$548,34. Four of the companies reported the number of employees injured during the year as 1,100, of which the injuries of 40 resulted in death.

FRUIT AND VEGETABLE CANNING.—In 1901 the 46 canneries in operation in the State reported an invested capital of \$873,195. They gave employment to 6,014 work people, 2,094 males and 3,920 females, and paid out in wages a total of \$267,828. The selling value of the product was \$1,320,886.

ECONOMIC CONDITION OF THE BUILDING TRADES.—This is an inquiry into the working time, wage rates, yearly and weekly earnings, etc., of mechanics and laborers employed in the building trades in all the large cities of the State for the year ending February 28, 1902. The results of the inquiry are summarized in the following tables:

STATISTICS OF EMPLOYEES IN THE BUILDING TRADES, 1902.

Occupation.	Number of employees.	Number who are—		Days idle during year from—			Average days employed during year.
		Unionists.	Non-unionists.	Want of work.	Sickness.	Strikes.	
Bricklayers.....	183	151	32	82	5	2	217
Stone masons.....	74	53	21	76	9		221
Masons' laborers.....	79	64	15	96		5	205
Plasterers.....	73	69	4	90	2		214
Lathers.....	79	69	10	89	6		211
Stonecutters.....	24	15	9	53	4		219
Architectural sheet-iron workers.....	118	71	47	59	6		240
Roofers (tar, gravel, and slate).....	16	12	4	90	10		206
Structural-iron workers.....	43	40	3	100	5		201
Electrical workers.....	124	83	41	79	3		224
Plumbers.....	191	113	78	44	7	2	253
Carpenters.....	211	146	65	62	6	2	236
Painters and paper hangers.....	174	88	86	80	5	1	221

Occupation.	Average hours worked per day.	Average daily wages.	Average yearly earnings.	Number who own homes.	Number who rent homes.	Average yearly rent.	Average size of family.
Bricklayers.....	8.6	\$3.42	\$732	65	118	\$114	4.0
Stone masons.....	8.8	3.69	815	33	41	112	4.5
Masons' laborers.....	8.4	2.32	485	6	74	85	4.0
Plasterers.....	8.3	3.62	772	15	58	115	3.8
Lathers.....	8.6	3.25	684	15	64	106	3.7
Stonecutters.....	8.2	3.64	801	7	17	142	3.2
Architectural sheet-iron workers.....	9.1	2.82	678	24	94	110	3.2
Roofers (tar, gravel, and slate).....	8.2	2.74	564		16	132	3.2
Structural-iron workers.....	8.0	3.75	565	1	42	124	3.2
Electrical workers.....	8.8	2.78	641	10	114	116	3.5
Plumbers.....	9.0	2.81	709	24	167	123	3.5
Carpenters.....	8.7	2.58	612	45	166	116	3.6
Painters and paper hangers.....	9.0	2.43	513	23	151	107	3.2

THE PROBLEM OF THE UNEMPLOYED.—This subject opens with an account of the free employment agencies established in the large cities of the States of Illinois, New York, and Ohio, but is chiefly devoted to an explanation of the plan recently adopted by the government of New South Wales for dealing with the problem of the unemployed.

COST OF LIVING.—This is a continuation of the presentation of previous years and shows the retail prices of 52 items of food and other commodities in the principal markets in all counties of the State in the month of June, 1902. Summary comparisons with the four years 1898 to 1901 are also given.

THE OYSTER INDUSTRY.—Under this title is given a historical account of the oyster fisheries of the State, together with the local and general laws enacted for their protection from the colonial period up to the present time. The presentation also includes statistics of the capital invested, wages, number of persons and vessels employed, and quantity and selling value of the product for the year 1901. During the year the 3,881 men employed on registered vessels in Delaware

Bay, Maurice River Cove, and the coast line to and including Atlantic City received \$854,150 in wages, the 1,157 floatmen and boatmen received \$599,924, and to shoremen was paid \$206,004.

DISEASES AND DISEASE TENDENCIES OF OCCUPATIONS.—This section of the report, which is continued from the report of 1901, is devoted to an inquiry into diseases and disease tendencies of occupations in the hat, jewelry, shoe, and cotton and woolen industries. The hat industry is represented by 6 establishments, the jewelry by 65, the shoe by 7, the cotton by 9, and the woolen by 3. The plan of presentation is similar to that for 1901.

COOPERATIVE SOCIETIES.—A brief account is here given of the 50 cooperative societies that have been organized in the State under the provisions of the act of 1884. Of these societies 9 were organized for manufacturing purposes and 41 for carrying on distributive or retail stores. Of the 9 manufacturing ventures 7 were organized between 1884 and 1890, and from reports made to the labor bureau in 1895 it appears that not one of these ever began business; the other 2 were incorporated in 1902. Of the 41 distributive societies 33 were incorporated previous to 1895 and 8 since that time. Before a start was made 8 out of the 33 dissolved and 25 succeeded in opening stores, 10 of which were in operation in 1895; but it is believed that none of the latter are now in existence. Five societies have been organized since 1901, but the time since their organization has been too brief to announce the results of the ventures.

LABOR CHRONOLOGY.—Under this title are recorded the occurrences relating to or affecting labor for the eight months ending September 30, 1902, and embrace labor disputes, accidents to labor, organization of new labor unions, establishment of new industrial enterprises, etc.

DECISIONS OF COURTS.—This consists of extracts from recent decisions of the New Jersey courts in cases affecting the interests of labor.

PENNSYLVANIA.

Annual Report of the Secretary of Internal Affairs of the Commonwealth of Pennsylvania. Vol. XXX, 1902. Part III, Industrial Statistics. James M. Clark, Chief of Bureau. 446 pp.

This report contains: Comparative statistics of manufactures, 396 pages; statistics of iron, steel, and tin-plate production, 31 pages; statistics of coal mining, 4 pages; directories of pig-iron furnaces, steel and rolling mills, and tin-plate plants, 6 pages.

STATISTICS OF MANUFACTURES.—A summary statement of the comparative statistics for the 88 manufacturing industries, representing 771 establishments, for the seven-year period, 1896 to 1902, is pre-following table:

COMPARATIVE STATISTICS OF 771 IDENTICAL MANUFACTURING ESTABLISHMENTS, 1896 TO 1902.

Year.	Capital invested in plants, and working capital.	Cost of basic material.	Market value of product.	Per cent of cost of basic material of value of product.	Average days in operation.
1896.....	\$196,940,994	\$91,252,619	\$185,249,628	49.3	270
1897.....	199,589,439	100,781,837	202,292,309	49.8	286
1898.....	204,509,452	114,164,071	237,690,026	48.0	286
1899.....	236,300,736	163,102,615	320,743,139	50.9	288
1900.....	253,684,241	181,416,894	351,376,655	51.6	288
1901.....	260,452,976	186,054,607	366,722,365	50.7	293
1902.....	262,635,694	212,622,632	421,141,115	50.5	293

Year.	Persons employed.	Aggregate wages paid.	Average yearly earnings.	Average daily wages.	Value of product per employee.	Per cent of wages of value of product.
1896.....	129,240	\$49,430,808	\$382.47	\$1.42	\$1,433.38	26.7
1897.....	134,918	51,827,646	384.14	1.84	1,499.37	26.6
1898.....	150,990	60,681,022	401.89	1.40	1,573.55	25.5
1899.....	173,302	75,797,895	437.37	1.52	1,850.78	23.7
1900.....	184,623	81,029,889	439.97	1.53	1,923.21	23.1
1901.....	191,153	86,103,628	450.44	1.54	1,918.48	23.5
1902.....	203,927	98,432,570	482.68	1.65	2,065.15	23.4

IRON, STEEL, AND TIN PLATE PRODUCTION.—The statements following present the principal data for 1902 in the production of pig iron, steel, rolled iron and steel, and tin plate:

PIG IRON.

Capital invested.....	\$158,391,090
Gross tons of production.....	8,111,642
Realized value.....	\$126,857,231
Value of basic material.....	\$61,634,972
Average days in operation.....	314
Number of workmen employed.....	17,101
Aggregate wages paid.....	\$10,191,759
Average yearly earnings.....	\$595.97
Average daily wages.....	\$1.89
Cost of labor per ton.....	\$1.25
Tonnage per man per day.....	1.51

STEEL.

Gross tons of production:	
Bessemer.....	4,208,354
Open hearth, acid process.....	791,216
Open hearth, basic process.....	3,429,033
Crucible and other processes.....	82,562
Total.....	8,511,195

ROLLED IRON AND STEEL.

Capital invested.....	\$247,870,718
Gross tons of production:	
Rails.....	1,272,222
Iron and steel structural shapes.....	1,074,856
Cut nails and spikes.....	33,638
Plates and sheets (including black plate for tinning).....	1,808,992
Other rolled products.....	5,239,657
Total.....	9,429,365

Value of product (not including the tin-plate works)	\$360, 338, 972
Workmen employed (not including those in the tin-plate works)	95, 720
Aggregate wages paid	\$60, 721, 858
Average days in operation	285
Average yearly earnings	\$634. 68
Average daily wages	\$2. 23
Average value per ton	\$39. 16
Cost of labor per ton	\$8. 60

TIN PLATE (BLACK PLATE WORKS).

Capital invested (22 plants)	\$10, 858, 403
Pounds of production of black plate:	
Tinned	352, 544, 992
Not tinned	75, 898, 600
Total	428, 443, 592
Value of product	\$16, 116, 755
Workmen employed	8, 905
Aggregate wages paid	\$4, 506, 105
Average days in operation	198
Average yearly earnings	\$506. 02
Average daily wages	\$2. 55

TIN PLATE (DIPPING WORKS.)

Capital invested (5 plants)	\$718, 503
Pounds of production of tin and terne plate	44, 250, 396
Value of product	\$2, 274, 552
Workmen employed	358
Aggregate wages paid	\$164, 540
Average days in operation	279
Average yearly earnings	\$459. 61
Average daily wages	\$1. 61

STATISTICS OF COAL MINING.—In the table following are presented statistics of the anthracite and bituminous coal operations for the year ending June 30, 1902:

Items.	Anthracite coal.	Bituminous coal.
Miners	35, 842	79, 121
Inside workmen	58, 592	18, 853
Outside workmen	47, 846	13, 255
Aggregate wages paid to miners	\$17, 776, 586	\$39, 867, 090
Aggregate wages paid to inside workmen	\$21, 296, 893	\$10, 306, 272
Aggregate wages paid to outside workmen	\$11, 504, 659	\$6, 016, 817
Average days worked (miners)	175	232
Average days worked (inside workmen)	173	214
Average days worked (outside workmen)	177	243
Average yearly earnings (miners)	\$495. 97	\$508. 87
Average yearly earnings (inside workmen)	\$363. 47	\$516. 67
Average yearly earnings (outside workmen)	\$306. 37	\$453. 93
Average daily wages (miners)	\$2. 83	\$2. 16
Average daily wages (inside workmen)	\$2. 10	\$2. 24
Average daily wages (outside workmen)	\$1. 73	\$1. 87
Value on board cars of 43,807,862 tons shipped	\$93, 680, 686	
Realized value of 93,174,265 tons mined		\$98, 725, 939
Average tons mined per man per year	1, 222	1, 177
Average tons mined per man per day	7	6

RECENT FOREIGN STATISTICAL PUBLICATIONS.

AUSTRIA.

Die Wohlfahrts-Einrichtungen der Arbeitgeber zu Gunsten ihrer Angestellten und Arbeiter in Oesterreich. Herausgegeben vom k. k. arbeitsstatistischen Amte im Handelsministerium. I. Theil. Wohlfahrts-Einrichtungen der Eisenbahnen. I. Heft. Privat-Eisenbahnen. 240 pp.

This is the first of a series of three volumes, published by the Austrian bureau of labor statistics, containing the results of investigation of various institutions for the welfare of employees. The present volume relates to employees of private steam railways and steam tramways. The two other volumes deal with employment on State railways and in manufacturing and mercantile establishments, respectively.

The present volume contains twelve chapters dealing respectively with the following subjects: Number of establishments and employees; systems of salary and wage payments and statistics of salaries and wages; treatment of employees during military service; hours of labor, night work, leaves of absence, and disposition of employees during times of slackness in traffic; contractual relations between the companies and their employees; loan and savings institutions; sickness, accident, and other relief institutions; arrangements for the cheap supply of commodities to employees; housing of employees; prevention of accidents and hygiene; education and apprenticeship; spiritual, ethical, and social improvement of employees. An appendix contains copies of schedules of inquiry and by-laws of various institutions.

The information was obtained partly from published official reports and partly by means of printed schedules of inquiry sent to the railway companies. It mostly covers the years 1898 to 1900, but that relating to hours of labor is for the year 1901.

RAILWAY EMPLOYEES AND WAGES.—The following table shows the number of private steam railways and steam tramways considered in this report, and their aggregate mileage in 1898, 1899, and 1900.

NUMBER AND MILEAGE OF PRIVATE STEAM RAILWAYS AND TRAMWAYS IN AUSTRIA, 1898 TO 1900.

Year.	Steam railways.								Steam tramways.		Total.	
	Principal railways.		Independent local railways.		Cog-wheel railways.		Total.		Num-ber.	Mile-age.	Num-ber.	Mile-age.
	Num-ber.	Mile-age.	Num-ber.	Mile-age.	Num-ber.	Mile-age.	Num-ber.	Mile-age.				
1898	14	4,192	28	639	5	20	47	4,851	6	86	53	4,937
1899	14	4,192	31	676	5	20	50	4,888	7	89	57	4,977
1900	14	4,233	36	737	5	20	55	4,990	7	83	62	5,073

*The decrease in mileage here shown is due to a decrease for one tramway, as shown in the original report, from 10.130 kilometers (6.29 miles) in 1899 to 0.221 kilometers (0.14 mile) in 1900. As the report shows for 1900 a great increase in number of employees on this tramway, the mileage figures appear to be in error.

The next table shows the number of employees and their aggregate salaries, wages, and other allowances in 1898, 1899, and 1900, arranged according to the classification adopted by the Austrian railway companies:

NUMBER OF EMPLOYEES AND WAGES PAID ON PRIVATE STEAM RAILWAYS AND TRAMWAYS IN AUSTRIA, 1898 TO 1900.

Occupation classes	Persons employed.			Aggregate salaries and wages.		
	1898.	1899.	1900.	1898.	1899.	1900.
Principal railways:						
Officials (<i>Beamten</i>)	9,271	9,461	10,165	\$5,984,472.89	\$6,266,612.44	\$6,597,668.49
Inferior officials (<i>Unterbeamten</i>)	4,765	5,126	5,695	2,177,213.16	2,309,742.12	2,633,573.20
Female employees	1,261	1,311	1,378	92,034.11	94,624.11	113,420.36
Other permanent employees (<i>Diener</i>)	23,320	25,179	26,668	6,286,726.89	6,855,882.87	7,197,343.28
Workmen engaged by the day	51,844	53,546	58,513	7,662,491.59	7,955,158.72	8,578,494.79
All employees	90,461	94,623	102,419	22,202,938.64	23,481,920.26	25,120,500.12
Independent local railways:						
Officials	192	188	225	103,208.57	100,329.50	107,130.00
Inferior officials	106	100	137	32,058.98	31,201.91	38,196.08
Female employees	5	10	9	725.93	1,680.08	1,971.74
Other permanent employees	529	539	557	109,415.78	115,176.52	119,904.38
Workmen engaged by the day	1,142	1,195	1,412	128,568.02	132,694.61	150,998.71
All employees	1,974	2,032	2,340	373,972.28	381,082.57	418,200.91
Cogwheel railways:						
Officials	11	11	13	5,279.22	5,558.95	6,351.06
Inferior officials	17	17	19	5,571.54	5,649.69	6,264.78
Female employees	7	7	7	840.83	815.25	845.50
Other permanent employees	31	31	25	5,430.66	5,152.54	3,178.96
Workmen engaged by the day	49	54	55	6,998.22	7,266.18	8,161.21
All employees	115	120	119	24,120.47	24,482.61	24,801.53
Steam tramways:						
Officials	48	66	70	26,344.12	33,050.43	33,000.29
Inferior officials	65	67	85	22,212.26	21,769.72	28,156.91
Female employees	5	6	9	995.51	1,169.68	1,476.01
Other permanent employees	134	144	266	33,015.11	31,701.29	46,369.67
Workmen engaged by the day	322	334	408	57,507.06	64,512.18	74,943.13
All employees	574	617	838	140,074.06	152,203.30	183,946.01
All private steam railways:						
Officials	9,522	9,726	10,473	6,119,299.80	6,405,551.32	6,744,149.84
Inferior officials	4,933	5,310	5,936	2,237,053.94	2,368,403.44	2,706,190.97
Female employees	1,278	1,334	1,403	94,596.38	98,189.07	117,713.61
Other permanent employees	24,014	25,893	27,516	6,434,588.44	7,007,913.22	7,866,796.31
Workmen engaged by the day	53,357	55,129	60,388	7,855,564.89	8,159,631.69	8,812,597.84
All employees	93,124	97,392	105,716	22,741,106.45	24,039,688.74	25,747,448.57

The exact meaning of the terms "*Beamten*," "*Unterbeamten*," and "*Diener*" is not clear. In the first class are probably included all higher officials, including station masters in the cities and others having responsible administrative posts. The second class probably includes

inferior officials, such as station agents, baggage masters, locomotive engineers, conductors, etc. The term "*Diener*" is applied to all other permanent railway employees in the regular classified service of the companies.

The employees on the regular permanent rolls of the companies receive fixed salaries or wages. These include the first four groups of the preceding table. The day workers and other temporary employees, which are included in the last group, are paid in some instances by the day and in some by the task. The collective contract system is common on the private roads, by which workmen organize into groups and appoint a foreman to represent them in their relations with their employers. The collective earnings of a group are determined by a piece-price list agreed upon in the contract, and are distributed among the members of the group at the end of each wage period. The companies in some cases guarantee the contract workers a certain normal daily wage, and in some cases advance money to cover deficiencies that may occur in the earnings during a wage period. The contract workers are required to make a deposit with the company to secure the performance of the contract, this deposit being refunded with interest at the termination of the contract. The classes of labor performed under this system vary in the different companies. They include building and construction work, shop work, loading and unloading, delivery of merchandise, etc.

The systems of allowances supplemental to the regular wages and salaries are somewhat complicated. Regular allowances for quarters are made to certain classes of employees, and free coal is given in some instances; also extra allowances for overtime, night work, extra mileage, travel pay, etc., are granted. In addition to these a number of companies give increased pay for long-continued service; prizes for economy in the use of fuel, oil, and other materials; rewards for discovering defects or obstructions in the road bed, dangerous defects in the engines or rolling stock, or for otherwise preventing accidents; and premiums for meritorious service in the handling of trains, facilitating transportation, etc.

The original report contains detailed tables showing for the year 1898 the highest and lowest salaries, wages, and allowances for quarters paid to certain classes of employees on 19 railways in Austria. The following table gives this information for the three leading roads, which employ nearly two-thirds of all the persons in the private steam-railway service.

When such employees are required to go to war they are considered as being indefinitely furloughed. In such case persons in the ranks of the army or navy receive one-half their regular pay and their entire allowance for quarters, if they have families or other dependents; if not, they receive one month's salary upon leaving, and if they serve over six months they receive one month's salary upon returning to the company's service. Persons receiving military pay during such service and having families or other dependents obtain one-third their regular railway service pay and allowance for quarters. This amount is increased to one-half if their military pay and allowances amount to less than one-half their railway pay. Persons receiving military pay and having no families or dependents receive, upon leaving, an amount equal to one-twelfth their annual salary and allowances. During such war service the contributions for pension and provident funds are deducted from their pay, and the time absent on such duties is credited to them for the purposes of the funds as if they had continued in the railway service.

If, upon returning from the regular military service or from war, the employee is found upon examination to have become physically incapacitated during such service, he or, if he dies in the interim, his family have the same claim upon the railway pension and provident funds as if the employee had been in the service of the company, except that in case the injury occurred during military service the time spent in the military service is not credited in the fixing of the amount of the claim.

All of the above-mentioned employees when required to participate in the periodical military practice exercises obtain a furlough with full pay and allowances for quarters during such service. Payments to the pension and provident funds must be continued while on such temporary military duty, and the time of absence is not charged against them.

Persons not included in the above classes are considered as having severed their connection with the railway company when they enter the military service, but after such service they are preferred for reemployment when vacancies occur.

HOURS OF LABOR, LEAVES OF ABSENCE, ETC.—The investigation of the hours of labor, night work, leave of absence, and the disposition of employees at times of depression was the subject of a special schedule inquiry made at the beginning of the year 1901. Returns were received from 19 railway companies, but they are not presented in such a way that they can be reproduced in summary form. The hours of continuous duty as reported for the different roads range from 2 to 25½ hours, and the periods of rest following labor from 2 to 30 hours.

The private railways grant their permanent employees (*Beamten*, *Unterbeamten*, and *Diener*) annual leave of absence, the length of which varies with the character of the employment. Sometimes a certain length of service, as from 3 to 10 years, is required before leave is granted. The salaries usually do not continue for a longer period than one month when on leave. If absent for a longer period, employees receive either part pay or their salary is discontinued entirely. Laborers receive leave of absence, but usually without pay.

During seasons of slackness in traffic, employees are retained in service by being employed and laid off in turns, or by being given work in other departments.

RELATIONS BETWEEN THE COMPANIES AND THEIR EMPLOYEES.—The regulation of the relations between the railway companies and their employees varies with the different roads. Certain qualifications are required for employment, such as a specified age, physical condition, etc. Salaries increase with length of service. Employees usually receive free transportation after they have served a certain time. The railway employees are members of railway relief funds and receive in case of sickness or other disability either regular relief from these funds or allowances from the companies.

In the employment of women preference is given to dependents of deceased employees. They perform either clerical work or are employed at flag or signal stations or as charwomen or laborers.

Employees on most railroads are required to obtain permission if they wish to marry. This permission is given, as a rule, only when the employee's total earnings are considered sufficient for a married man. Persons marrying when not entitled to insurance in the regular relief funds are sometimes required to take out life-insurance policies. Refusal to comply with the requirements concerning marriage usually involves forfeiture by the wife and children of all claims for relief, and in some cases the punishment of the offender.

LOAN AND SAVINGS INSTITUTIONS.—Most of the railway companies make loans or advances to their permanent employees without charging interest. In a number of the larger railway companies loan and savings institutions have been founded either by the companies or by the employees. There is usually a specified maximum and minimum amount that may be deposited by any individual, and the same is true of loans made to employees by the companies or loan associations.

RELIEF AND INSURANCE.—The introduction of compulsory sick and accident insurance in Austria has narrowed the scope of voluntary relief institutions among railway employees. Some of the existing voluntary institutions secure the continuance of the regular wages or salaries of members for a limited time during illness, pay funeral expenses, or give pensions to dependents of deceased employees. The

Most important of these voluntary institutions, however, are the old age and disability pension and provident funds, supported by contributions in part from the companies and in part from members. In addition to these special funds, the railroad companies grant direct relief in some cases. The following statement shows the receipts and expenditures of 26 sick-relief institutions in 1900:

Receipts:

Contributions of members	\$296, 997. 32
Contributions of railway companies.....	155, 216. 64
Other receipts.....	23, 222. 39
Total receipts	475, 436. 35

Expenditures:

Sick relief, medicines, etc.....	403, 113. 75
Physicians' fees	61, 145. 43
Other expenditures.....	6, 889. 00
Total expenditures	471, 148. 18

Assets at the close of the year 516, 332. 53

In addition to the relief required by law, these institutions also give medical attendance, medicines, hospital treatment, etc., to the wives of members, and to their children under 18 years of age.

All employees of private steam railways are insured against accident in an organization known as the *Berufsgenossenschaftliche Unfall Versicherungs-Anstalt der österreichischen Eisenbahnen*. The law of June 20, 1894, requires the railway companies to assume the entire burden of accident insurance.

The following statement shows the contributions and relief payments made to this fund by 36 railway companies in 1900:

Railways reporting contributions	36
Amount of contributions.....	\$940, 154. 10
Railways reporting relief payments	30
Expenditures for relief during temporary disability, medical attendance, etc	\$146, 217. 45

Permanent pensions to—

Disabled employees	\$105, 000. 74
Widows	26, 596. 04
Children	28, 183. 50
Parents.....	2, 312. 58

Total permanent pensions.....	162, 092. 86
Final settlements.....	1, 005. 46
Funeral expenses.....	1, 543. 00

The table which follows shows the number of persons killed and injured by accidents reported on 23 private steam railways in Austria in 1900:

PERSONS KILLED AND INJURED BY ACCIDENTS ON PRIVATE STEAM RAILWAYS IN AUSTRIA, 1900.

Character of accidents.	Persons killed.	Persons injured.	Total.
Derailments		9	9
Collisions	1	59	60
Other accidents	54	398	452
Total	55	466	521

Following is a statement showing the total receipts and expenditures of the old age and disability pension institutions of 18 Austrian railways in 1900:

Receipts—

Contributions of members	\$721,252.91
Contributions of railway companies	1,251,875.22
Other receipts	623,084.14
Total receipts	2,596,212.27

Expenditures—

Pensions	1,968,521.65
Final settlements	15,872.16
Education of children	47,901.30
Voluntary aid	376.36
Other expenditures	99,775.52

Total expenditures	2,132,446.99
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Assets at the close of the year	13,278,104.55
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In addition to these pension institutions 16 local railways participate in another institution which, in 1900, expended 5,392 kroner (\$1,094.58) for pensions to widows, relief to orphans, etc.

COMPANY STORES.—A number of the railway companies have established company or cooperative stores for the purpose of enabling their employees to obtain their commodities at the cheapest possible prices. The companies assist these institutions by giving the free use of buildings, and by shipping the goods at reduced rates. As a rule these stores sell only to employees of the company and only in such quantities as are needed for the use of the purchaser and his family. In some cases a limit depending upon the amount of the wages or salary received by the employee is placed upon the amount that he may purchase during any period. Purchasers may buy either for cash or on credit, certain categories of employees being in some instances excluded from the privilege of making credit purchases. The amount of credit given usually depends upon the earnings of the purchaser, but some-
 a maximum figure is fixed. Payments of credit purchases are

usually made by deductions from the wages or salaries, but occasionally installment payments are permitted. The profits from these concerns are either devoted to relief or reserve funds or are distributed among the purchasers in proportion to the purchases made.

The railway companies regularly furnish their employees with fuel at cost price. In some cases where employees live in company houses they receive fuel free of cost.

The railway companies do not conduct dining rooms, but nearly all of them have contracts with owners of station dining rooms, restaurants, etc., whereby employees pay from 10 to 25 per cent less than the regular rates for meals.

HOUSING OF EMPLOYEES.—Special institutions for the encouragement of home ownership among employees do not exist on the Austrian private railways. The companies, however, erect dwelling houses, and the larger ones establish colonies in localities where they employ many persons, especially in the vicinity of workshops. Persons connected with the railway stations and whose presence is constantly required, are given quarters in the station buildings. Flag and signal men are likewise furnished with homes at or near their posts of duty. In some instances the pension institutions construct working people's dwellings as an investment for part of their funds. Most of the railway companies allow certain employees (station agents, flagmen, etc.) ground for cultivation, either free of cost or for a small rent. In 1900, 25 private railway companies had erected 5,036 houses for station men, flagmen, and switchmen, and 735 buildings for other employees.

PREVENTION OF ACCIDENTS.—Special attention is given by the Austrian railways to the prevention of accidents. The arrangements, appliances, regulations, etc., for this purpose are so manifold that they can not be enumerated here. Among them may be mentioned vestibule cars, inclosed shelters for brakemen, cabs for locomotive engineers, etc., on trains; guards on machinery, and sanitary arrangements, such as proper light, heat, ventilation, and cleanliness in workshops. All the companies have carefully prepared rules and regulations for the health and safety of employees. The train and station employees are instructed and examined by the company physicians in giving first aid to the injured, and certain stations are supplied with rescue appliances, bandages, and stretchers.

EDUCATION.—Many of the larger railway companies have at times endeavored to establish day nurseries, kindergartens, orphan asylums, and schools for the children of employees, and some companies provide for the education of the children of employees by the payment of tuitions or for free scholarships in certain educational institutions.

At the instance of the Austrian Railway Officials' Club, the Austrian State railways and several private railways maintain in Vienna a continuation school for the technical education of certain classes of rail-

way employees in active service. The administration of this school is in the hands of a board of governors consisting of five members, three of whom are appointed by the conference of Austrian railway directors and two by the above-mentioned club. The expenses of the school are borne by the participating railways in proportion to their railway mileage within the borders of Austria.

Apprentices are indentured only in the workshops of the larger private railways.

RELIGIOUS, ETHICAL, AND SOCIAL IMPROVEMENT.—All railway employees are given at least one Sunday per month for church attendance. In Vienna and Oderberg special services are held for the employees of one of the larger roads. The same company has subsidized many churches and it affords special transportation facilities for employees stationed at a distance from churches.

Several larger railway companies have established libraries for their employees. Sometimes employees' social clubs and singing societies receive substantial aid from the railway companies.

COST OF BETTERMENT INSTITUTIONS.—It was not possible to obtain accurate statistics of the actual cost to the railway companies of the various institutions enumerated above. In round numbers the aggregate expenditures of the companies in 1898 were 5,000,000 kroner (\$1,011,500) for the old age and invalidity funds, 3,500,000 kroner (\$708,050) for compulsory sick and accident insurance, 2,500,000 kroner (\$505,750) for rewards, prizes, etc., and about 1,000,000 kroner (\$202,300) for other betterment purposes, making a total of about 12,000,000 kroner (\$2,427,600). This, however, is probably more than the average yearly cost, because in 1898 many special donations were made on account of the celebration in that year of the fiftieth anniversary of the Emperor's accession to the Austrian throne.

CANADA.

Report of the Royal Commission on Industrial Disputes in the Province of British Columbia. Issued by the Department of Labor. 1903. ix, 77 pp.

This is the report of a commission appointed in April, 1903, to inquire into and report upon disputes between owners of coal and metalliferous mines and their employees, and between transportation companies and their employees in the Province of British Columbia. The disputes investigated by the commission were: Strike of United Brotherhood of Railway Employees, and sympathetic strikes; disputes in the coal mines of British Columbia during 1903; strike of coal miners at Ladysmith, and strike of coal miners at Union.

After detailing the causes which led up to the strikes investigated,

the commission proceeds to a discussion of the general questions raised. From the conclusions of the commission the following extracts are reproduced:

With respect to the employers and the employed, it is their clear duty to the community, whose protection they both enjoy, to meet each other, either by themselves or through the mediation of third parties, and by temperate discussion and conciliation settle their difficulties as best they can, each making considerable sacrifice, if necessary, to avoid the loss and injury which will otherwise occur to the public.

With respect to the rights of employers and workmen in relation to strikes and lockouts, we think much would be gained if these could be clearly set forth in a code.

It is clearly one of the fundamental rights of every employer that he may employ any man he chooses, subject, of course, to any laws that may be regulating the particular business. * * * We think that strikes solely because of the employment of nonunion labor ought to be made punishable by law.

It must be remembered that unionism and the demand for recognition of the union, i. e., of the right to make a collective bargain, are the natural outcome of the present stage of industrial development. * * * The right view of this matter seems to be that the strike for recognition, that is, for the right to make a collective bargain, should not be declared unlawful, but that it is specially incumbent on the authorities, when such a strike takes place, to see that no illegal methods are used to reinforce it.

The majority of workmen feel the necessity for some kind of organization, and organize they will, in some form or other, and therefore their right to combine to improve their conditions and to form unions for that purpose ought to be better recognized and regulated by law than it is. It is better that they be encouraged to establish legitimate unions which will be clothed with responsibility for the exercise of power, and which will, therefore, be more readily recognized and dealt with by employers, than that they should join secret organizations.

We think that legitimate trade unionism ought to be encouraged and protected. * * * We would therefore suggest that provision be made for the incorporation of trade unions with a model constitution; that among other things it should be provided that no strike should be declared without at least thirty days' notice to the employer. * * * To protect the union it ought to be made an offense for the employer to discriminate against or discharge any member of an incorporated union for the reason only that he is or intends to become a member of such union. * * *

With regard to preventive measures by the parties themselves, obviously the simplest and best way is for the contending parties to settle their differences by compromise and mutual concession, either with or without the mediation of others. * * * As to the best method of minimizing the danger of strikes and lockouts by legislation, we think the most effective means will be found in compelling publicity at the earliest stage of the trouble.

There is no doubt that the establishment of boards of conciliation will go far in the direction of avoiding strikes and lockouts. The weight of opinion in Great Britain and the United States, both among

employers and employed, seems to be that conciliation ought to be the method invariably resorted to in the settlement of industrial disputes, and that a general scheme of compulsory arbitration would be productive of more harm than good, the chief grounds of objection being that it is a very serious interference with the freedom of contract; that it is generally a compromise which is not satisfactory to either party, being arrived at in the last result by an umpire who may not fully appreciate the position of one or other of the parties, and that it is seldom loyally accepted and lived up to by both parties.

* * * The weight of opinion as expressed before the commission was against compulsory arbitration, and while we do not think that a law applying this method of settling disputes to industries generally would meet with general approval, there are special cases in which it would seem to be the necessary final resort.

One of the most legitimate modes in which a legislature can aid in improving the condition of the workmen is by the shortening of hours. Of course this ought to be done gradually, and after carefully taking into account the conditions of the particular industry in other countries, so as not to transfer it elsewhere or drive it out of our own country.

GREAT BRITAIN.

Statistics of proceedings under the Workmen's Compensation Acts, 1897 and 1900, and the Employers' Liability Act, 1880, during the years 1901 and 1902. 38 pp.; 39 pp. (Published by the Home Office.)

These reports contain such statistical information as the Home Office could collect with reference to the workings of the workmen's compensation acts, 1897 and 1900, and the employers' liability act, 1880, during the years 1901 and 1902. They show for each of the countries, England and Wales, Scotland, and Ireland, statistics regarding the cases of arbitration under the workmen's compensation act in the county and sheriff courts and memoranda registered in the same, the number and results of actions in county and sheriff courts under the employers' liability act, statistics of the proceedings of each court, appeals to higher courts under each act, and a list of appeals under the workmen's compensation acts. As these statistics cover only cases which have come before the courts, they leave untouched the great body of cases in which compensation was settled by agreement and by informal arbitration. The tables contain the same particulars as those for preceding years, except that the workmen's compensation act of 1900, which came into operation on July 1, 1901, extended the benefits of the act of 1897 to agricultural laborers.

In England and Wales during the year 1902, under the workmen's compensation acts, 1,269 cases were dealt with by county court judges and county court arbitrators, as compared with 1,370 in the previous year. The number decided by judges was 1,200 in 1902, as against 1,280 in 1901, while the number of cases in which it was necessary to

appoint a special arbitrator was 9 in each year, and 60 cases in 1902 and 72 in 1901 were settled by acceptance of money paid into court. In addition to these there were 538 cases in 1902 and 548 in 1901 which were either withdrawn, settled out of court, or otherwise disposed of.

During 1902, of the claims for compensation finally settled within the courts 801 cases were in favor of the plaintiff and 167 in favor of the defendant. The award in 360 cases was in lump sums and in 441 in weekly payments. Compensation in 264 cases was awarded on account of death, in all of which the deceased left dependents. The amount awarded was £44,353 5s. 1d. (\$215,845.11), or an average award to each dependent of £168 0s. 1d. (\$817.59). With regard to the awards of compensation for the 537 cases of injury, in 96 cases the compensation was in lump sums, averaging £36 3s. 11d. (\$176.15) per case, and in 441 cases weekly sums were assigned, 242 being cases of total and 199 cases of partial disability. The average weekly allowance in the former was 12s. 2d. (\$2.96) and in the latter 9s. 11d. (\$2.41).

During 1901, of the claims for compensation finally settled within the courts 1,007 cases were in favor of the plaintiff and 167 in favor of the defendant. The award in 399 cases was in lump sums and in 608 in weekly payments. Compensation in 301 cases was awarded on account of death, in all of which the deceased left dependents. The total awarded was £56,702 3s. 7d. (\$275,941.15), or an average award to each dependent of £188 7s. 7d. (\$916.75). With regard to the awards of compensation for the 706 cases of injury, in 98 cases the compensation was in lump sums, averaging £32 5s. 1d. (\$156.96) per case, and in 608 cases weekly sums were assigned, 345 being cases of total and 263 cases of partial disability. The average weekly allowance in the former was 11s. 10d. (\$2.88) and in the latter 9s. 8d. (\$2.35).

The cases in 1902 in which memoranda were registered in county courts numbered 2,161, of which 2,152 were settled by agreement, 1 by committee, and 8 by agreed arbitrator. There were 134 cases of death and 2,027 of disability. The average award to dependents in case of death was £157 12s. 9d. (\$767.14), and the average weekly payment in case of disability 13s. 1d. (\$3.18).

The cases in 1901 in which memoranda were registered in county courts numbered 1,636, of which 1,623 were settled by agreement and 13 by agreed arbitrator. There were 120 cases of death and 1,516 of disability. The average award to dependents in case of death was £167 5s. (\$813.92), and the average weekly payment in case of disability 13s. 5d. (\$3.26.).

During the year 1902 the cases under the employers' liability act in county courts numbered 548, of which 136 resulted in favor of the plaintiff, 70 in favor of the defendant, 1 was removed to a higher court, and 341 were otherwise disposed of. The damages awarded

amounted to £9,330 9s. 6d. (\$45,406.76), the average in the 33 cases of death being £115 7s. 10d. (\$561.55).

During the year 1901 the cases under the employers' liability act in county courts numbered 590, of which 159 resulted in favor of the plaintiff, 100 in favor of the defendant, 2 were removed to a higher court, and 329 were otherwise disposed of. The damages awarded amounted to £11,294 11s. 4d. (\$54,965.01), the average in the 30 cases of death being £89 15s. (\$436.77).

The number of cases in 1902 under the workmen's compensation acts carried to the court of appeal was 59, of which 27 were by workmen and 32 by employers; in 1901 the number carried to the court of appeal was 61, of which 22 were by workmen and 39 by employers. In 1902 there was 1 appeal by workmen to the House of Lords and in 1901 there were 3 appeals, while there was none by employers in either year. Under the employers' liability act in 1902 there were 6 appeals to the high court of justice, 2 by workmen, and 4 by employers; in 1901 there were 16 appeals, 4 by workmen and 12 by employers.

On June 30, 1902, 47 compensation schemes, as against 50 on June 30, 1901, were certified by the registrar of friendly societies as being in operation. The 47 schemes in 1902 affected 127,344 workmen, distributed among the following industries: Railways, 2 schemes, affecting 40,288 workmen; factories, 17 schemes, affecting 20,782 workmen; mines, 27 schemes, affecting 65,981 workmen; quarries, 1 scheme, affecting 293 workmen. In 1901 the 50 schemes in operation affected 133,592 workmen, as follows: Railways, 2 schemes, affecting 40,431 workmen; factories, 20 schemes, affecting 22,719 workmen; mines, 27 schemes, affecting 70,142 workmen; quarries, 1 scheme, affecting 300 workmen.

In 1902 there were 2,393 deaths by accident in railways, factories, mines, and quarries. Of claims for compensation 429 cases, or 18 per cent of all deaths, were brought before the county courts, 410 being under the workmen's compensation act and 19 under the employers' liability act. In 1901 the deaths by accident in railways, factories, mines, and quarries numbered 2,275. Of claims for compensation 437 cases, or 19 per cent of all deaths, were brought before the county courts, 420 being under the workmen's compensation act and 17 under the employers' liability act. As regards claims for injury, it is believed that the number of litigated cases in each year was less than 1 per cent of the total number of cases in which compensation was payable. Therefore, the cases which come before the courts represent but a small proportion of those in which compensation is paid under the acts; the great majority are settled by agreement, and only a small percentage are carried to formal arbitration.

In Scotland, of the 338 cases under the workmen's compensation acts

during 1902, coming before the sheriff courts, 220 were heard by the sheriff and 118 were withdrawn or otherwise settled out of court. Of 98 cases settled in court, 130 were in favor of the plaintiff and 68 in favor of the defendant. The compensation awarded in the 130 cases in favor of the plaintiff was in the form of lump sums aggregating £8,270 0s. 9d. (\$40,246.14) for 61 cases, and weekly payments amounting to £39 15s. 3½d. (\$193.51) for 69 cases. There were 159 cases in which memoranda were registered in the sheriff courts; and of these 158 were settled by agreement and 1 by agreed arbitrator. Lump sums aggregating £9,424 2s. (\$45,862.38) were awarded for 95 cases, and for 54 cases the awards were for weekly sums aggregating £33 4s. 1d. (\$161.59).

In 1901, of the 311 cases under the workmen's compensation acts coming before the sheriff courts, 203 were heard by the sheriff and 108 were withdrawn or otherwise settled out of court. Of 189 cases settled in court, 123 were in favor of the plaintiff and 66 in favor of the defendant. The compensation awarded in the 123 cases in favor of the plaintiff was in the form of lump sums aggregating £5,978 9s. 5d. (\$29,094.23) for 43 cases, and weekly payments amounting to £45 16s. 5d. (\$222.99) for 80 cases. There were 76 cases in which memoranda were registered in the sheriff courts, and of these 75 were settled by agreement and 1 by agreed arbitrator. Lump sums aggregating £3,420 2s. (\$16,643.92) were awarded for 36 cases, and for 37 cases the awards were for weekly sums aggregating £25 5s. 9d. (\$123.06).

Of the 167 cases under the employers' liability act coming before the sheriff courts during 1902, 3 were decided in favor of the plaintiff, 26 in favor of the defendant, 21 were removed to the court of session, and 117 were otherwise disposed of. Damages aggregating £410 (\$1,995.27) were awarded in the 3 cases in favor of plaintiff. Of the 159 cases during 1901, 7 were decided in favor of the plaintiff, 14 in favor of the defendant, 18 were removed to the court of session, and 120 were otherwise disposed of. Damages aggregating £675 (\$3,284.89) were awarded in the 7 cases in favor of plaintiff.

In 1902 there were 26 cases of appeal to the court of session under the workmen's compensation acts, 14 by workmen and 12 by employers, and 41 cases under the employers' liability act, 40 by workmen and 1 by employers. In 1901, under the workmen's compensation acts, there were 23 cases of appeal, 8 by workmen and 15 by employers, and under the employers' liability act there were 23 cases, 22 by workmen and 1 by employers.

In Ireland, of the 171 cases under the workmen's compensation acts during 1902 coming before the county courts, 132 were heard by judges and 1 by arbitrator, 2 were settled by the acceptance of money paid into court, and 36 were otherwise disposed of. Of the 135 cases settled in court, 85 were for the plaintiff and 50 for the defendant.

The amount of compensation awarded in the 85 cases in favor of the plaintiff was in the form of lump sums aggregating £3,199 15s. 10d. (\$15,571.79) for 45 cases, and weekly payments amounting to £15 5s. (\$74.21) for 40 cases. There were 42 cases in which memoranda were registered, all of which were settled by agreement. Lump sums aggregating £978 7s. (\$4,761.14) were awarded in 25 cases, and in 15 the awards were for weekly sums amounting to £7 16s. 3d. (\$38.02).

Of the 126 cases under the workmen's compensation acts during 1901 coming before the county courts, 104 were heard by judges, 3 were settled by the acceptance of money paid into court, and 19 were otherwise disposed of. Of the 107 cases settled in court, 82 were for the plaintiff and 25 for the defendant. The compensation awarded in the 82 cases in favor of the plaintiff was in the form of lump sums aggregating £2,220 (\$10,803.63) for 32 cases and weekly payments amounting to £20 7s. 6d. (\$99.16) for 50 cases. There were 23 cases in which memoranda were registered, all of which were settled by agreement. Lump sums aggregating £683 3s. (\$3,324.55) were awarded in 8 cases, and in 15 the awards were for weekly sums amounting to £7 8s. 2d. (\$36.05).

During 1902, of the 14 cases under the employers' liability act coming before the county courts, 6 were decided in favor of the plaintiff, 4 in favor of the defendant, and 4 were otherwise disposed of. Damages aggregating £159 (\$773.77) were awarded in the 6 cases in favor of plaintiff. During 1901, of the 13 cases coming before the county courts, 6 were decided in favor of the plaintiff, 3 in favor of the defendant, and 4 were otherwise disposed of. Damages aggregating £214 12s. (\$1,044.35) were awarded in the 6 cases in favor of plaintiff.

During 1902 there were 16 cases of appeal to the court of appeal under the workmen's compensation acts, 9 by workmen and 7 by employers, and 3 cases to the high court of justice under the employers' liability act, 2 by workmen and 1 by employers. During 1901 there were 3 cases of appeal to the court of appeal under the workmen's compensation acts, 1 by workmen and 2 by employers, and 4 cases to the high court of justice under the employers' liability act, 2 by workmen and 2 by employers.

The following table shows the number of cases in the United Kingdom coming before the county and sheriff courts under the workmen's compensation acts, 1897 and 1900, and the employers' liability act, 1880, during 1901 and 1902, classified according to the nature of the employment of the persons concerned:

CASES DURING 1901 AND 1902 COMING BEFORE THE COUNTY AND SHERIFF COURTS UNDER THE WORKMEN'S COMPENSATION ACTS, 1897 AND 1900, AND THE EMPLOYERS' LIABILITY ACT, 1880.

1901.

Nature of employment.	Cases under workmen's compensation acts, 1897 and 1900.				Cases under employers' liability act, 1880.			
	Eng-land and Wales.	Scot-land.	Ire-land.	United King-dom.	Eng-land and Wales.	Scot-land.	Ire-land.	United King-dom.
Railway	162	27	11	200	17	10	.....	27
Factory	992	152	79	1,223	377	68	3	448
Mine	337	78	.....	415	8	27	.....	35
Quarry	48	7	3	58	6	.....	3	9
Engineering work	117	15	8	140	21	6	5	32
Building	213	32	25	300	124	37	.....	161
Agriculture	19	.....	.....	19	6	1	.....	7
Other .....	.....	.....	.....	.....	31	10	2	43
Total	1,918	311	126	2,355	590	159	13	762

1902.

Railway	144	19	14	177	7	14	1	22
Factory	865	123	94	1,082	351	77	4	432
Mine	335	121	.....	456	4	9	.....	13
Quarry	70	8	10	88	7	.....	1	7
Engineering work	114	28	9	151	31	21	.....	53
Building	197	31	22	250	122	38	8	168
Agriculture	82	8	22	112	4	1	.....	5
Other .....	.....	.....	.....	.....	22	7	.....	29
Total	1,807	338	171	2,316	548	167	14	729

Since 1898 there has been a falling off in the number of cases under the employers' liability act, as a result of the new rights given by the workmen's compensation acts.

Report of the Committee on the Establishment of Cooperative Credit Societies in India. 47 pp.

This is the report of a committee appointed to consider and report upon the establishment of cooperative credit societies (agricultural banks) in India. The agricultural banks, which have been so successful in improving the condition of the poorer classes in European countries, rest upon cooperative credit, and the committee confined its attention to banking on this basis. In concluding that a system of cooperative credit is capable of affording great benefits to the agricultural people of India the committee had the general support of the opinions expressed in the reports recently received from local governments.

Accepting the establishment of cooperative credit societies as the object in view, the committee considered first the lines on which such societies should be worked, the privileges which should be accorded to them, and the extent to which it might be advisable that they should be aided by government funds and subjected to government control. The committee next considered what practical form or forms a society constituted on these principles should assume, and drew up two model schemes of management for the two classes of society contemplated—**a model scheme of management for cooperative credit societies with limited liability with shares, and a model scheme of management for cooperative credit societies with unlimited liability and without share**

Finally the committee discussed the extent to which legislation is required to secure to such societies as might be started the privileges recommended for them and to provide for their proper working and supervision; therefore the committee embodied the results of its deliberations in the form of a proposed bill.

There are also presented in the report notes on the Madras loan funds (associations) and on village banks in the northwestern provinces and Oudh, and the rules of the Dhandla fund.

NORWAY.

Tabeller vedkommende Arbejdsloninger i Aaret 1900. Norges Officielle Statistik. Fjerde Raekke Nr. 60. Udgivne af det statistiske Centralbureau. 1903. 27 pp.

This work on wages in Norway is one of a series of publications of the Norwegian statistical bureau. It consists of a compilation of statistics showing the wages of male and female servants in rural districts and in cities and towns in 1890, 1895, and 1900, by districts, towns, and localities; the wages, with and without board, of men, women, and children engaged as farm hands and as day laborers in the summer and winter of 1900; the daily wage rates paid in 1900 in certain skilled and unskilled occupations; summary tables showing the average wages paid in rural districts and in cities and towns in certain skilled and unskilled occupations in 1880, 1885, 1890, 1895, and 1900; and the yearly wages of male and female servants in every fifth year from 1850 to 1900. Tables are also given showing the average wages of railway and road laborers in Norway and of employees in the fire and engineering departments of the city of Christiania for each year and for five-year periods from 1871 to 1901.

The following table shows the wages paid in cities and towns in 1880, 1885, 1890, 1895, and 1900, in twenty skilled trades selected from the list given in the report:

DAILY WAGES PAID IN 20 SKILLED TRADES IN CITIES AND TOWNS IN NORWAY,
1880 TO 1900.

Occupation.	1880.	1885.	1890.	1895.	1900.
Bakers.....	\$0.61	\$0.67	\$0.72	\$0.76	\$0.88
Blacksmiths.....	.63	.67	.76	.73	.88
Bookbinders.....	.65	.69	.72	.72	.87
Bricklayers and masons.....	.81	.94	1.02	1.04	1.24
Butchers.....	.59	.59	.67	.68	.77
Carpenters.....	.59	.65	.77	.77	.90
Coopers.....	.56	.69	.66	.68	.89
Hatters.....	.63	.66	.79	.72	.91
Iron molders.....	.67	.76	.78	.85	.94
Joiners.....	.58	.64	.70	.68	.85
Millers.....	.54	.59	.66	.64	.73
Painters.....	.63	.69	.77	.79	.93
Printers and compositors.....	.73	.75	.77	.77	.93
Rope makers.....	.59	.59	.63	.63	.73
Sailmakers.....	.58	.58	.66	.66	.79
Ship carpenters.....	.55	.61	.68	.71	.82
Shoemakers.....	.54	.56	.61	.62	.77
Tailors.....	.62	.64	.71	.71	.83
.....	.61	.62	.66	.69	.79
.....	.59	.65	.72	.70	.86

DECISIONS OF COURTS AFFECTING LABOR.

[This subject, begun in Bulletin No. 2, has been continued in successive issues. All material parts of the decisions are reproduced in the words of the courts, indicated when short by quotation marks, and when long by being printed solid. In order to save space, matter needed simply by way of explanation is given in the words of the editorial reviser.]

DECISIONS UNDER STATUTORY LAW.

EXEMPTION OF WAGES—SUCCESSIVE GARNISHMENTS—ABUSE OF PROCESS—PUNITIVE DAMAGES—*Cooper v. Seyoc, St. Louis Court of Appeals, 79 Southwestern Reporter, page 751.*—In this case David R. Seyoc appealed from a judgment against him in an action brought by Charles F. Cooper, in the Hannibal court of common pleas, to recover damages for abuse of process in procuring successive garnishments, resulting in the discharge from employment of the plaintiff Cooper. Cooper was a mechanic employed in the shops of a railway company, and was indebted to Seyoc in the sum of \$14.20 and costs, to recover which repeated garnishments, each requiring answer and release, were served on the employing company, though it was known that Cooper's wages were exempt under the statute. It was in evidence that Seyoc had declared that by following up the case he would compel Cooper's discharge, which, after nine garnishments and a letter threatening the withdrawal of patronage from the railroad, was accomplished. Cooper was awarded damages, both actual and punitive, whereupon Seyoc appealed. The appeal resulted in the affirmation of the judgment of the court below, with a partial remission of damages.

Judge Bland, for the court, after stating the facts in the case, spoke in part as follows:

The evidence is so clear and convincing as to leave no reasonable doubt that the defendant maliciously directed the repeated service of summons on the railroad company as garnishee, when he had no reasonable ground to believe that anything could be collected from the railroad company as the debtor of the plaintiff, and knew that the wages of the plaintiff he sought to garnish were exempt from process of garnishment, and that his purpose in having repeated service of summons on the railroad company, as garnishee, was to either force the plaintiff to pay the judgment and costs, or to so annoy the railroad company with process of garnishment as to cause it to discharge plaintiff from its employ. It is contended by the defendant, however, that, conceding he was actuated by express malice, and that his purpose was to

oppress the plaintiff, and that he knew the process of garnishment would not be available for the collection of the judgment, or any part of it, yet he had a legal right to order the executions, and to have them renewed from time to time, and to order the constable to garnish the railroad company; and, being possessed of this legal right, he can not be mulcted in damages for the exercise of it, notwithstanding his motive. On principle, an action for wrongfully, maliciously, and without probable cause levying an execution upon exempt property of the debtor or garnishing his wages that are exempt can not be distinguished from an action for maliciously and without probable cause levying an attachment against a debtor or garnishing his exempt property. Both are equally an abuse of judicial process. We think the remedy resorted to by the plaintiff in this case is the only adequate one, and that it is sanctioned by the law. Therefore we conclude that the petition states a good cause of action, and the demurrer to the evidence and motion in arrest of judgment were properly overruled.

No case has been cited, nor have we been able to find one, where in a case like this the plaintiff was entitled to damages for loss of time by being thrown out of employment. It was not in the power of the defendant to discharge him, nor to compel the railroad company to do so. The act of discharging plaintiff was that of the railroad company, not of the defendant. It is true that the evidence shows that the wrongful and malicious conduct of the defendant in annoying the railroad company by repeatedly summoning it as garnishee was the cause that moved the company to discharge the plaintiff. The conduct of the defendant was, perhaps, the remote cause of plaintiff's discharge, but it was not his act, and for this reason we do not think defendant is liable for his loss of time directly caused by the act of another with whom defendant was not acting in concert.

It is finally contended that it was the duty of the constable to have protected the plaintiff from the unlawful and oppressive use of the execution in his hands, and that he erred in serving the summons of garnishment on the railroad company. All this may be granted, yet the fact remains that the constable, in all he did, obeyed the express directions of the defendant, and all he did was expressly ratified by the defendant. In such circumstances the law is well settled that the officer and the defendant are jointly and severally liable for the wrongful acts of the officer.

For error in authorizing the jury to assess damages for loss of time, the judgment will be reversed, and the cause remanded, unless within 10 days from the date of the filing of this opinion plaintiff remits \$174 of the actual damages awarded by the jury on the second count of the petition. If the remittitur be entered as herein provided, it is ordered that the judgment stand affirmed for the balance of the damages awarded by the jury on both counts.

LABOR LAW—CURRENT RATE OF WAGES—CONSTITUTIONALITY OF STATUTE—WAIVER—*Ryan v. City of New York*, *Court of Appeals of New York*, 69 *Northeastern Reporter*, page 599.—This case came before the court of appeals on appeal from the appellate division of the supreme court. Pierce Ryan had sued the city of New York for a sum of \$600, representing the difference between the rate of

ges which he had received for a period of years and the amount which he would have received if he had been paid according to the act of 1899, which requires that employees of the State and municipalities thereof shall receive not less than the current rate of wages in their respective employments in the localities in which such service is rendered. The claim sued upon had accrued between 1894 and 1900. In deciding the case two questions were considered: First, the power of the legislature to enact a statute thus fixing the rate of wages to be paid; second, whether or not the claimant's right to recover had failed from lapse of time. The judgment of the lower court had been against Ryan, and this judgment was affirmed in the court of appeals. On the ground that he had waived his right to an action by accepting the wages proffered during the term of six years. The following extracts from the remarks of Judge Parker, who delivered the opinion of the court, present the majority views, upholding the constitutionality of the statute in question:

Here the legislature undertakes to provide for the payment of not less than the prevailing rate of wages, not only to the direct employees of the State, but also to its indirect employees working in its several subdivisions—the cities, counties, towns, and villages. In the administration of the affairs of those subdivisions, as well as in those of the State at large, the legislature is unrestrained, unless by express provisions of the constitution. As expressed in *Rodgers' case*, 166 N. Y. 1, 29, 59 N. E. 716, 726, 82 Am. St. Rep. 605, 52 L. R. A. 814 [see Bulletin of the Department of Labor No. 35, p. 805]: "The authority of the State is supreme in every part of it, and in all of the public undertakings the State is the proprietor. For convenience of local administration the State has been divided into municipalities, in each of which there may be found local officers exercising a certain measure of authority, but in that which they do they are but the agents of the State, without power to do a single act beyond the boundary set by the State acting through its legislature." Thus all of these agencies and employees in the several municipalities are doing the work of the State, which is the sovereign and master.

Since the foregoing was written, the opinion of the United States Supreme Court in *Atkin v. State of Kansas*, 191 U. S. 207, 24 Sup. Ct. 124, has been brought to our attention. [See Bulletin of the Bureau of Labor No. 50, p. 177.] It is in point, and decides the question in accordance with the views we have already expressed. Our conclusion is that so much of the statute as is involved in this case is constitutional.

MECHANIC'S LIEN—ATTORNEY'S FEE—CONSTITUTIONALITY OF STATUTE—*Atkinson et al. v. Woodmanssee*, *Supreme Court of Kansas*, 74 *Pacific Reporter*, page 640.—This was a suit for the foreclosure of a mechanic's lien and the recovery of attorney's fees under section 5125, Gen. St. 1901, which reads as follows:

"In an action brought by any artisan or day laborer to enforce any lien under this act, where judgment be rendered for plaintiff, the

plaintiff shall be entitled to recover a reasonable attorney's fee fixed by the court, which shall be taxed as costs in the action."

Judgment was given the claimants in the district court of Wyandotte County, which judgment was modified on appeal to the supreme court, by striking out the allowance for attorney's fees on the ground that the section above quoted is unconstitutional.

From the remarks of Judge Burch, who delivered the opinion of the court, the following is reproduced as showing the grounds of the court's conclusions:

The statute in question singles out property owners who are charged with receiving from artisans or day laborers labor going to the improvement of their property, by virtue of contract made by themselves or through contractors employed by them, and mulcts them in damages if they should be unsuccessful in resisting a claimed lien therefor. Under the statute such persons are subjected to a liability for attorney's fees when owners of other classes of property, and when other classes of persons employing artisans and day laborers are not subjected to such burden, and their contracts for labor are segregated from all other contracts and separately classified, as if they possessed some distinctive attribute calling for the imposition of special legislative penalties for their enforcement.

In the baldest and most arbitrary manner imaginable, this act "singles out a certain class of debtors and punishes them, when for li delinquencies it punishes no others. * * * It is no sufficient answer to say that they are punished only when adjudged to be in debtors, or equally with other debtors. They are not treated as ot wrong. They do not enter the courts upon equal terms. They pay attorney's fees if wrong; they do not recover any if right; their adversaries recover if right, and pay nothing if wrong. suits, therefore, to which they are parties, they are discriminated against, and are not treated as others. They do not stand equal the law. They do not receive its equal protection." (Gulf, C & Santa Fé Ry. v. Ellis, 165 U. S. 150, 153, 17 Sup. Ct. 27 Ed. 666.) [See Bulletin of the Department of Labor No. 17 There is, therefore, a perfectly manifest and utterly irreconcilable conflict between the statute and the constitution.

DECISIONS UNDER COMMON LAW.

—PROCURING DISCHARGE—
London Guaranty
... 6

by above named indemnifying itself against loss from injuries to employees to the extent of \$5,000 in case of injury to a single person, the policy containing a provision that all suits should be defended by the insurance company unless it should elect to pay to the manufacturers the indemnity above named. The firm was not permitted to settle any claim except at its own cost nor to interfere in any legal proceeding arising out of demands for accidents without the consent of the company previously given in writing. A Mr. Robinett, as representative of the insurance company, called on Horn at different times, offering him various small sums if he would sign a release of all claims or damages on account of the injury incurred. This he declined to do and entered suit against his employers, during the pendency of which the insurance company's representative called at the factory of Horn's employers and attempted again to make a settlement, which Horn refused. This representative threatened Horn that if he did not accept the sum offered his (Horn's) discharge would be procured and he would be prevented from obtaining employment elsewhere. The firm's manager, O'Connell, declined at first to discharge Horn when the demand was made, saying that the policy contained no provision requiring them to do so. The threat was then made that the indemnifying contract with the firm would be immediately abrogated unless Horn was discharged, whereupon O'Connell directed Horn to complete his job and call for his final payment. He was told at the time that it was the purpose of the firm to continue his employment all the year round, but that on account of the position of the insurance company they would have to discharge him. A contract with the insurance company allowed for a cancellation of the policy at any time upon giving five days' previous notice. The threat was, however, "to cancel this policy to-day." On the grounds of having maliciously caused his discharge, Horn sued in the superior court of Cook County and obtained judgment, which was afterwards affirmed in the appellate court, and on this appeal was affirmed by the supreme court of the State, Judges Wilkin and Cartwright dissenting. From the remarks of Judge Scott, who delivered the opinion of the court, the following is quoted:

We have been favored with most elaborate and exhaustive briefs by counsel for both parties. The case principally relied upon by counsel for appellant [the insurance company] is that of *Allen v. Flood*, 67 L. J. Q. B. 119, decided by the House of Lords in 1897.

In *Quinn v. Leatham*, App. Cas. of 1901, p. 495 (decided by the House of Lords), Lord Macnaghten, in speaking of *Allen v. Flood*, stated that its headnote might well have run in these words: "An act which does not amount to a legal injury can not be actionable because it is done with a bad intent;" and in this case last referred to it is said that "it is a violation of legal right to interfere with contractual relations recognized by law, if there be no sufficient justification for the interference."

We are of opinion that the contention of appellant in the case at bar, to the effect that competition in trade, employment, or business is such a justification, is in accord with the authorities.

In our judgment the cases cited by appellant, in so far as they lend support to its theory, will be found to be cases where the party who secured the discharge of the employee was in some way in competition with that employee in the business or work in which the employee was then engaged, or was a member of some organization which was in competition with the employee or some organization to which that employee belonged, and the fact that such competition existed has been treated by some of the courts as justification for the act of the defendant in bringing about the discharge. In fact, appellant seems to take this view, for it devotes a considerable portion of its argument to an attempt to show that plaintiff and defendant were in competition with each other, in that appellant desired to secure or satisfy the alleged right of action of appellee for the least possible sum, while appellee desired to secure for that right of action the greatest possible sum. While it is true that the temporal interests of Horn and appellant were involved in the negotiations between them, we believe that the authorities which look upon competition as a justification for the act of one party in securing the discharge of an employee have regarded the term in a more restricted sense, and given to the term "competition" its ordinary meaning and signification. It can not be held that appellee and appellant were, in any ordinary sense of the term, in competition with each other. It is also to be observed that the injury which it was sought to visit upon Horn was not primarily to subject him to a deprivation of his employment, but was to compel him to surrender a right not connected with his employment. If the only object of appellant had been to secure appellee's discharge for the purpose of obtaining his position for another, or for the reason that the employment of appellee by Arnold, Schwinn & Co. in some way conflicted with the right of appellant, or some organization to which it belonged, to obtain the same or similar employment, a very different question, and one not now before this court, would be presented, and *Allen v. Flood*, supra, and other cases of that character, cited by appellant, would then be worthy of greater consideration.

It is further contended on the part of the appellant that while the evidence may have shown that it was animated by "malice," in the ordinary acceptance of the term, toward Horn, the proof fails to show any legal malice. In this connection it is argued that appellant had the right to have Horn discharged under the terms of the contract, or, if it did not have that right, that it seriously and in good faith believed that it had, and that it is thereby relieved of any imputation of malice. There is no provision in the policy which by the wildest stretch of the imagination could be held to give any such right to appellant, and this court in attempting to secure a settlement of this case shows it to have been arbitrated by a wanton disregard of the rights of appellee. When Mr. Robinett made this threat, which resulted in appellee's discharge, he was making a threat to do an unlawful thing—to do a thing which appellant, by the terms of the contract, had no right to do. The contract provided only for its cancellation upon five days' notice. It is not pretended that any such notice had been given, but Robinett secured Horn's discharge by threatening to cancel the contract "to-day." We think it perfectly

rent that the attorney for appellant, and its agent, Robinett, each
ht to bring about, and finally did bring about, the discharge of
llee by threatening to do acts which each, respectively, knew he
is right to do.

e therefore conclude, both upon reason and authority, that where
rd party induces an employer to discharge his employee who is
ing under a contract terminable at will, but under which the
oyment would have continued indefinitely, in accordance with the
e of the employer, except for such interference, and where the
motive moving the third party is a desire to injure the employee
to benefit himself at the expense of the employee by compelling
atter to surrender an alleged cause of action, for the satisfaction
hich, in whole or in part, such third party is liable, and where
right of action does not depend upon and is not connected with
ontinuanee of such employment, a cause of action arises in favor
e employee against the third party.

LAWS OF VARIOUS STATES RELATING TO LABOR ENACTED SINCE JANUARY 1, 1896.

[The Second Special Report of this Bureau contains all laws of the various States and Territories and of the United States relating to labor in force January 1, 1896. Later enactments are reproduced in successive issues of the Bulletin from time to time as published.]

GEORGIA.

ACTS OF 1903.

ACT No. 394.—*Employment of children while parents live in idleness.*

(Page 46.)

SECTION 1. From and after the passage of this act section 453, volume 3 of the Code of 1895 is hereby amended so that said section, thus amended, shall read as follows:

* * * * *

7. All persons who are able to work and who do not work, but hire out their minor children and live upon their wages, shall be deemed and considered vagrants;

* * * * *

Approved August 17, 1903.

ACT No. 345.—*Contract of employment with intent to defraud.*

(Page 90.)

SECTION 1. From and after the passage of this act if any person shall contract with another to perform for him services of any kind with intent to procure money, or other thing of value thereby, and not to perform the service contracted for, to the loss and damage of the hirer; or after having so contracted, shall procure from the hirer money, or other thing of value, with intent not to perform such service, to the loss and damage of the hirer, he shall be deemed a common cheat and swindler, and upon conviction shall be punished as prescribed in section 1039 of the Code.

SEC. 2. Satisfactory proof of the contract, the procuring thereon of money or other thing of value, the failure to perform the services so contracted for, or failure to return the money so advanced with interest thereon at the time said labor was to be performed, without good and sufficient cause and loss or damage to the hirer, shall be deemed presumptive evidence of the intent referred to in the preceding section.

Approved August 15, 1903.

ACT. No. 307.—*Interference with employment.*

(Page 91.)

SECTION 2. Section 1 of said act [approved December 17, 1901] is amended * * * so that said section, when amended, shall read as follows:

Section 1. When the relation of employer and employee, or of landlord and tenant of agricultural lands, or of landowner and cropper, has been created by written contract or by parol contract partly performed, made in the presence of one or more witnesses, it shall be unlawful for any person during the life of said contract, made and entered into in the manner above described, to employ, or to rent lands to, or to furnish lands to be cropped by said employee, tenant or cropper, or to disturb in any way said relation, without first obtaining the written consent of said employer, landlord or landowner, as the case may be.

Approved August 7, 1903.

MINNESOTA.

ACTS OF 1903.

CHAPTER 69.—*Hours of labor of locomotive engineers and firemen.*

SECTION 1. On all lines of steam railroads or railways operated in whole or in part in this State the time of labor of locomotive engineers or locomotive firemen employed in running or operating the locomotive engines on or over such railroads or railways shall not at any time exceed fourteen (14) consecutive hours without an opportunity be given them for rest. At least nine (9) hours, or as many hours less than nine (9) as is asked for by said engineers or firemen, shall be allowed them for rest before said engineers or firemen are again ordered or required to go on duty: *Provided, however,* That nothing in this section shall be construed to allow any engineer or fireman to desert his locomotive in case of accident, storms, wrecks, washouts, snow blockades or any unavoidable delay arising from like causes, or as prohibiting said engineers or firemen from working longer if they do not object.

SEC. 2. Any railroad company or superintendent, chief dispatcher, train master, master mechanic or other railroad or railway official who shall order or require any locomotive engineer or locomotive fireman to labor contrary to the provisions of section one (1) of this act shall be deemed guilty of a misdemeanor and on conviction thereof shall be punished by a fine of not less than twenty-five (25) dollars or more than one hundred (100) dollars, or by imprisonment for not less than thirty (30) days nor more than sixty (60) days; and all railroad or railway corporations operating on or [of] railways or railroads, in whole or in part in this State, shall be liable for all injuries to said engineers or firemen resulting from their being required to labor contrary to the provisions of section one (1) of this act.

Approved March 19, 1903.

CHAPTER 117.—*Examination and licensing of steam engineers, etc.*

SECTION 1. The third subdivision of section ten (10) of chapter two hundred and fifty-three (253) of the General Laws of one thousand eight hundred and eighty-nine (1889) [shall] be amended so as to read as follows:

Third. No license shall be granted to any person to act as second-class engineer who has not taken and subscribed an oath that he has had at least one year of actual experience in operating steam boilers and steam machinery, or whose experience and habits of life are not such as to warrant the belief that he is competent to take charge of all classes of steam boilers and steam machinery not to exceed one hundred horsepower: *Provided,* That any person who shall operate or take charge of any steam boiler or steam machinery of any kind of a higher or greater horsepower than the maximum horsepower of the class for which he is licensed shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by imprisonment of not less than twenty days nor more than ninety days, or by a fine of not less than ten nor more than fifty dollars: *Provided further,* That every master, engineer or pilot who shall receive a license shall, when employed upon any vessel, place his certificate of license, which shall be framed under glass, in some conspicuous place in such vessel or engine room where it can be seen by passengers and others at all times, and that any master, engineer or pilot who shall neglect to comply with this provision shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by imprisonment of not less than ten nor more than ninety days, or by a fine of not less than ten nor more than one hundred dollars, and in addition thereto said license may be revoked.

Approved April 3, 1903.

CHAPTER 131.—*Inspection of steam boilers, etc.—Examination and licensing of steam engineers, etc.*

SECTION 1. Section four hundred and eighty (480) of General Statutes 1894, as amended by chapter ninety-one (91) of the General Laws of Minnesota for eighteen hundred and ninety-nine (1899) hereby is amended so as to read as follows, to wit:

Section 480. Within sixty (60) days after the passage of this act, and biennially thereafter, there shall be appointed by the governor a board of fifty-three (53) inspectors, one (1) of whom shall reside in each senatorial district, except as herein-after provided, whose duty it shall be to inspect all steam boilers in use within the State, not subject to inspection under the laws of the United States and not hereafter excepted, and to examine and grant certificates of license to steam engineers entrusted with the care and management of steam boilers: *Provided, however,* The provisions of this act shall not apply to heating plants in private residences: *And provided further,*

That when there is more than one senatorial district within any one county in this State, in such counties there shall be but one boiler inspector for each of such counties. Said inspectors shall examine and license all masters and pilots on inland waters of the State, and such examination shall be conducted, as near as may be, pursuant to the rules and regulations provided by the laws of the United States for the examination of masters and pilots. Said inspectors shall hold their respective offices for two (2) years from February first (1st), respectively, and until their successors are appointed and qualified, unless sooner removed by the governor. Said inspectors shall annually on or before the thirty-first (31st) day of January, render a report to the secretary of state, and to the legislature, showing a detailed statement of the number of inspections made, licenses issued, and the amount of fees received therefor, also showing the amount of disbursements of their offices.

Sec. 2. Section four hundred and ninety-four (494) of General Statutes 1894 [shall] be amended to read as follows, to wit:

Section 494. Each boiler inspector may appoint one or more deputies within his respective district who shall possess the same qualifications as are prescribed for boiler inspectors, and shall qualify by taking the oath prescribed by section four hundred and eighty-one (481) General Statutes 1894, and such deputies shall have the authority within the district for which they are appointed as the boiler inspectors have.

Approved April 3, 1903.

CHAPTER 393.—*Employment of labor—Blacklisting—Participation in strikes.*

SECTION 1. It shall be unlawful for any individual or corporation or member of any firm, or any agent, officer or employee of any company or corporation to contrive or conspire to prevent any person from obtaining or holding employment, or to discharge, or to procure or attempt to procure a discharge of any person from any employment by reason of such person having engaged in any strike.

Sec. 2. It shall be unlawful for any individual or corporation, whether acting for himself directly or through another person, agent or agency, or whether acting as agent or employee of another person or persons, or as a member of any firm, or as an officer, agent or employee of any company or corporation, to require from any person, as a condition to any contract of employment, any written statement as to his participation in any strike, or any written statement as to his personal record, except as to conviction for crime or misdemeanor, for a period of more than one year immediately preceding the date of making application for such employment, and the use or requirement by any such individual or corporation acting in any of the capacities aforesaid of blanks or forms of application for employment in contravention of the provisions of this act are hereby forbidden.

Sec. 3. Any violations of any of the provisions of this act shall be deemed a misdemeanor and shall be punishable by a fine not exceeding \$100, or by imprisonment in the county jail for a period not exceeding three months.

Approved April 21, 1903.

CHAPTER 397.—*Protection of employees on buildings—Elevator shafts.*

SECTION 1. If any contractor, person, firm, or corporation use or causes to be used any elevating machines or hoisting apparatus in the construction or building of any building or other structure for the purpose of lifting or elevating materials to be used in such construction, such contractor, person, firm or corporation engaged in construction [of] such building shall cause the shafts or openings in each floor to be enclosed or fenced in on all sides by a barrier of suitable material at least four feet high: *Providing, however,* That this bill shall not apply in any way to mining operations.

Sec. 2. Any contractor, person, firm or corporation violating any of the provisions of this act shall be guilty of a misdemeanor, and shall be fined not less than twenty-five dollars nor more than one hundred dollars.

Approved April 22, 1903.

MISSOURI.

ACTS OF 1903.

PAGE 82.—*Examination and licensing of plumbers.*

SECTION 1. Any person, firm or corporation desiring to engage or continue in the business of plumbing or drain laying either as a master plumber or as a journeyman plumber or as a plumbing inspector in any city or town in this State having a population of fifty thousand or more inhabitants shall first comply with the provisions of ch.

SEC. 2. There shall be in every such city or town a board of examiners, which shall be known as the board for the examination of plumbers.

SEC. 3. Every person desiring to engage in or work at the business or trade of plumbing, except apprentices working with duly licensed plumbers, shall first be examined by and obtain from said board a certificate of his qualification and fitness to carry on and work at the business or trade of plumbing.

SEC. 4. In all cities or towns provided for in this act said board shall be composed of the following persons:

1st. The chief plumbing inspector of said city or town who shall be chairman of the board; and who shall serve on the said board without pay.

2nd. One master or employing plumber and one journeyman plumber, each of whom are residents of, and shall have resided in said city or town for at least three years next before their appointment and who shall have been actively engaged at the business or trade of plumbing for not less than five years, which two members shall be appointed by the mayor of said city or town and shall hold their respective offices at the pleasure of the mayor of said city or town, whose compensation shall be fixed by ordinance of said city or town to be paid out of the general revenue of said city or town.

SEC. 5. It shall be the duty of the mayor of the cities or towns provided for in this act, within thirty days after the provisions of this act shall take effect, to make the appointments therein provided for, and to call a meeting of said board within ten days thereafter for the purpose of organizing said board and to have the provisions of this act enforced.

SEC. 6. It shall be the duty of the members of said board, when notified by the mayor of said city or town, to meet and organize, adopt rules to carry into effect the provisions of this law, and designate the times and places of meeting for the examination of applicants as to their practical and mechanical knowledge of plumbing, house drainage and plumbing ventilation; and upon satisfactory proof of the qualification and fitness of the applicant, shall so certify to the chief supervisor or inspector of plumbing of said city or town. Said board shall thereupon issue a license to such applicant authorizing him to engage in or work at the business or trade of plumbing or drain laying as a master or employing plumber or as a journeyman plumber.

SEC. 7. The board shall elect one of its members secretary, whose duties shall be to keep a record of the business transacted by the board, and to account for all moneys collected by him, and who shall be required to execute a bond to said city or town in the sum of one thousand (\$1,000) dollars, to be approved by the mayor of said city.

SEC. 8. The board shall have the power to revoke any license issued by it upon satisfactory proof that the holder of said license has violated any of the provisions of this act or any city ordinance intended to carry the provisions of this act into effect, or for violation of any rule of said board, and if any such license shall be revoked, the same shall not be reissued within six (6) months thereafter. If any person, firm or corporation be charged with violation of any of the provisions of this act, it shall be the duty of the secretary of the board to serve a copy of said charges in writing on the person, firm or corporation so charged and notify him to appear on a day certain before said board and show cause why his license should not be revoked.

SEC. 9. The examination fee for a master or employing plumber shall be two (\$2) dollars. The fee for a journeyman plumber shall be two (\$2) dollars, which fee shall be paid to the secretary of said board, when the applicant for a license files his application for examination. All fees so paid to the secretary shall be paid by him to the treasurer of said city or town. Any license issued by any such board shall be valid throughout this State, and each license so issued shall be renewed annually upon the payment to the secretary of the board renewing the same a fee of one (\$1) dollar and the same may be renewed by any board created by this act.

SEC. 11. Any person, firm or corporation, or the agent or officer of any such person, firm or corporation, who shall violate, or cause or permit to be violated any of the provisions of this act, shall be deemed guilty of a misdemeanor and upon conviction thereof shall be fined not less than ten (\$10) dollars nor more than one hundred (\$100) dollars for each offense.

SEC. 13. The provisions of this act shall be inoperative until adopted by proper ordinance by the city or town to which it relates.

Approved March 27, 1903.

PAGE 218.—*Inspection of factories.*

SECTION 1. Section 2 on page 197 of the Session Acts of 1901, entitled "Labor: factory inspector," is hereby amended * * * so that said section when amended shall read as follows:

Section 2. The factory inspector may divide the State into districts, assign one or more assistant inspectors to each district, and may, in his discretion, transfer them from one district to another. It shall be the duty of all inspectors provided for by this act to make at least two inspections during each year, the last to be completed on or before the first day of October, of all factories located in cities having a population of thirty thousand inhabitants or more and enforce all laws relating to factory inspection and prosecute all persons violating the same. Any lawful municipal ordinance or regulation relating to factories or their inspection and not in conflict with State laws shall be observed and enforced by the factory inspector. The factory inspector and all assistant inspectors and clerks may administer oaths and take affidavits in matters relating to the enforcement of the various factory inspection laws.

Approved March 27, 1903.

PAGE 218.—*Arbitration of labor disputes.*

SECTION 1. Section 5 of an act to create a State board of mediation and arbitration, approved March 7, 1901, is hereby repealed and three new sections enacted in lieu thereof, to be known as Sec. 5, Sec. 5a, and Sec. 5b, to read as follows:

Section 5. Whenever it shall come to the knowledge of the board that a strike or a lockout is about to occur, or is seriously threatened, involving ten or more persons, in any part of the State, it shall be the duty of said board to proceed as soon as possible to the locality of such dispute, strike or lockout and place itself in communication with the parties to the controversy, and endeavor by mediation to effect a settlement. Should all efforts at conciliation fail, it shall be the duty of the board to inquire into the causes of said grievance or dispute, and to this end, it is hereby authorized to subpoena and examine witnesses, and send for books and papers. Subpoenas may be signed and oaths administered by any member of the board. Said board is further authorized to subpoena as witnesses anyone connected with the department of business affected, or other persons whom they may suspect of having knowledge of the matters in controversy or dispute, and anyone who keeps the records of the wages earned in such department and examine them under oath touching such matters and require the production of books and papers containing the record of wages earned or paid. All process issued by said board may be delivered or sent to any sheriff, constable or police office [officer], who shall forthwith serve or post the same as may be required, and make due returns thereof, according to directions, and for such service he shall receive the fees allowed by law in similar cases, payable from the treasury of the county or city wherein the controversy to be arbitrated exists, upon a warrant signed by the president of the board of mediation and arbitration. Witnesses shall receive the same compensation as witnesses in courts of record, which shall be paid in the same manner as sheriffs, constables and police officers above mentioned. And the board shall have power and authority to maintain and enforce order at its hearings and obedience to its process.

Sec. 5a. In case any person shall willfully fail or refuse to obey such subpoena, it shall be the duty of the circuit court, or any judge thereof in any county, upon the application of said board, to issue an attachment for such witness and compel such witness to attend before the board and give his testimony upon such matters as shall be lawfully required by said board; and the court shall have power to punish for contempt as in other cases of refusal to obey the process and order of such court.

Sec. 5b. Any person who shall willfully neglect or refuse to obey the process of subpoena issued by said board to appear and testify as therein required, shall be deemed guilty of a misdemeanor, and shall be liable to arraignment and trial in any court having competent jurisdiction, and on conviction thereof shall be punished for such offense by a fine of not less than twenty nor more than five hundred dollars, or by imprisonment not exceeding thirty days, or both, at the discretion of the court before which such conviction shall be had.

Approved March 23, 1903.

PAGE 219.—*Hours of labor of employees in smelters, etc.*

SECTION 1. It shall be unlawful for any person, persons or corporation engaged in smelting, refining or reducing ores, to work their employees at such labor or industry longer than eight hours in a day of twenty-four hours, and it is hereby declared that eight hours shall constitute a day for all laborers or employees engaged in the kind of labor or industry aforesaid.

SEC. 2. Any person or persons or corporation who shall violate any of the provisions of the preceding section shall, on conviction, be fined in a sum not less than twenty-five nor more than five hundred dollars.

Approved March 9, 1903.

PAGE 220.—*Payment of wages of railroad employees—Monthly pay day.*

SECTION 1. All persons or corporations engaged in operating a railroad or railroad in this State shall pay their employees once in every thirty days in lawful money of the United States, and at no pay day shall there be withheld more than ten days of the earnings of the employees. Any such operator or employer failing to pay his employees, their agents, assigns or any one duly authorized to collect such wages as in this section provided shall immediately become liable to the employees, his agent or assigns or any one duly authorized by such employee to recover an amount double the sum due such employee at the time of such failure or refusal to pay the wages due, to be recovered by civil action in any court of competent jurisdiction.

Approved February 23, 1903.

PAGE 242.—*Mine regulations—State examining boards.*

SECTION 1. A State board of coal mining is hereby created, composed of three members to be appointed by the governor, one of whom shall be a practical miner, one an expert mining engineer, and who shall, when practicable, be also hoisting engineer and one shall be mine owner. Each member of the board shall serve for a term of two years, or until his successor is appointed and qualified.

SEC. 2. It shall be the duty of said board to make formal inquiry into and pass upon the practical and technical qualifications and personal fitness of persons seeking certificates of competency as mine managers, mine foremen, assistant mine foremen, mine examiners and as hoisting engineers.

SEC. 3. Meetings of the board may be held at any time, and they may make such rules and conduct such examinations as in their judgment may seem proper for the purpose of such examinations. Public notice shall be given through the press or otherwise announcing the time and place at which examinations are to be held. The board shall report their action to the commissioners of labor and at least two of the members thereof shall certify to the qualifications of each candidate who has passed such examination.

SEC. 4. Persons coming before the State mining board as candidates for appointment as State inspectors of mines must produce evidence satisfactory to the board that they are citizens of this State, at least thirty years of age; that they have had a practical mining experience of ten years and that they are men of good repute and temperate habits; they must also submit to and satisfactorily pass an examination as to their practical and technical knowledge of mining engineering and mining machinery and appliances, of the proper development and operation of mines, of ventilation in mines, of the nature and properties of mine gases, of the geology of the mineral measures in this State and of the laws of this State relating to mines.

SEC. 5. At the conclusion of the examination for inspectors the board shall certify to the governor the names of all successful candidates.

SEC. 6. Persons coming before the board for certificates of competency as mine managers must produce evidence satisfactory to the board that they are at least 25 years old, that they have had at least five years practical mining experience, and that they are men of good repute and temperate habits, they must also submit to and satisfactorily pass such examination as to their experience in mines and the management of men, their knowledge of mine machinery and appliances, the use of surveying and other instruments, the properties of mine gases, the principles of ventilation and the specific duties and responsibilities of mine managers, as the board shall see fit to impose.

SEC. 7. Applicants for mine foremen and assistant mine foremen shall be at least 25 years of age, shall have had at least five years practical mining experience, give satisfactory evidence that they are men of good moral character and of known temperate habits. They must also submit to and satisfactorily pass such an examination as to their experience in mines, their knowledge of the properties of mine gases, the principles of ventilation and the specific duties and responsibilities of mine foreman and assistant mine foremen as the board shall see fit to impose.

SEC. 8. Persons seeking certificates of competency as mine examiners must produce evidence satisfactory to the board that they are at least 25 years of age, and of good repute and temperate habits. They must also submit to and satisfactorily pass an examination as to their experience in mines generating dangerous gases, their practical and technical knowledge of the nature and properties of fire damp, the laws of ventilation, the structure and uses of the safety lamp.

SEC. 9. Persons seeking certificates of competency as hoisting engineers must produce evidence satisfactory to the board that they are at least 21 years of age, that they have had at least two years experience as firemen or engineer of a hoisting plant, and are of good repute and temperate habits. They must submit and satisfactorily pass an examination as to their experience in handling hoisting machinery

and as to their practical and technical knowledge of the construction, cleaning and care of steam boilers, the care and adjustment of hoisting engines, the management and efficiency of pumps, ropes, and winding apparatus, and their knowledge of the laws of this State in relation to signals and hoisting and lowering of men at the mines.

SEC. 10. Applicants giving satisfactory evidence of having had at least five years continuous experience immediately preceding the examination in one of the following duties, mine manager, mine foreman, assistant mine foreman, mine examiner, hoisting engineer, as the case may be shall receive a certificate of service, which shall entitle them to continue in the duties of the position they held when said certificate was granted, for a period of two years and no longer: *Provided, however,* Any such person holding a certificate of service may at any time apply for and receive a certificate of competency in the manner provided in the preceding sections.

SEC. 11. The certificates provided for in this act shall be issued under the signatures and seal of the State mining board to all those who receive a rating above the minimum fixed by the rules of the board, such certificates shall contain the full name, age and place of birth of the recipient, and the length and nature of his previous service in or about mines.

SEC. 12. The board may exercise its discretion in issuing certificates of any class, but not without examination, to persons presenting with proper credentials, certificates issued by competent authority in other States.

SEC. 13. It shall be unlawful for the operator of any mine to employ, or suffer to serve, as mine manager, mine foreman, assistant mine foreman, or mine examiner, any person who does not hold a certificate of competency or of service issued by a duly authorized board of examiners of this State: *Provided,* That whenever any exigency arises by which it is impossible for any operator to secure the immediate services of a certified mine manager, mine foreman, assistant mine foreman, mine examiner as the case may be, he may place any trustworthy and experienced man, subject to the approval of the State mine inspector, to act temporarily for a period not to exceed ten days.

SEC. 14. It shall be unlawful for the operator of any mine to employ, or suffer to serve as hoisting engineer of said mine, any person who does not hold a certificate of competency or service issued by a duly authorized board of examiners of this State, to permit any other person to operate his hoisting engine except for the purpose of learning to operate it and then only in the presence of the certificated engineer in charge, and when men are not being hoisted or lowered: *Provided,* That whenever any exigency arises by which it is impossible for any operator to secure the immediate services of a certified hoisting engineer, he may place any trustworthy and experienced man, subject to the approval of the State mine inspectors, in charge of his engines to act as temporary engineer, for a period not to exceed 30 days.

SEC. 15. The certificate of any manager, mine foreman, assistant mine foreman, hoisting engineer or mine examiner may be canceled and revoked by the State mining board whenever it shall be established to the satisfaction of said board that the holder thereof has become unworthy of official endorsement, by reason of violation of the law, intemperate habits, manifest incapacity, abuse of authority, or for other causes satisfactory to said board: *Provided,* That any person against whom charges or complaints are made shall have an opportunity to be heard in his own behalf, and he shall have thirty days notice in writing of such charges.

SEC. 16. An applicant for any certificate herein provided for, before being examined, shall register his name with the secretary of the board, and file with him the credentials required by this act, to wit: An affidavit as to all matters of fact establishing his right to receive the examination, and a certificate of good character and temperate habits signed by at least ten of the citizens in the place in which he lived. Each candidate, before receiving the examination, shall pay to the secretary of the board the sum of one dollar as an examination fee, and those who pass the examination for which they are entered, before receiving their certificate, shall also pay to the secretary the further sum of two dollars each as a certificate fee. Also persons receiving certificates of service shall pay the sum of two dollars as certificate fee. All such fees shall be duly accounted for by the board and paid into the State treasury at the close of each fiscal year.

SEC. 17. The members of the State mining board shall receive as compensation for their services the sum of five dollars per day, for a term of not exceeding thirty days in any year, and whatever sums are necessary to reimburse them for such traveling and all necessary expenses as may be incurred in the discharge of their duties. All such salaries and expenses of the said board shall be paid upon vouchers duly sworn by each and approved by the president of the board and by the governor, and the auditor of public accounts is hereby authorized to draw his warrants on the State treasury for the amount thus shown to be due, payable out of any money in the treasury not otherwise appropriated.

ec. 18. Any owner, agent, operator or managing officer of any coal mine to which act applies found guilty of violating any of the provisions of this act shall be punished by a fine not exceeding five hundred dollars or less than one hundred dollars or by imprisonment in the county jail not exceeding six months or by both and imprisonment in the discretion of the court.

ec. 19. The provision[s] of this act shall apply only to coal mines.

Approved April 4, 1903.

PAGE 245.—*Mine regulations—Inspectors.*

SECTION 1. Section 8817 of article 2, chapter 133, Revised Statutes of the State of Missouri, 1899, is hereby amended * * * so that the section, as amended, shall read as follows:

Section 8817. There is hereby created a department to be known as the bureau of mines, mining and mine inspection, with its office located in the State capitol. The governor shall, for the inspection of coal mines, appoint an inspector and one assistant to the same, both of whom shall have been practical miners in coal mines. For lead, zinc and mines other than coal mines the governor shall appoint two inspectors, both of whom shall have had practical experience in lead and zinc mining; one of said inspectors shall be appointed to serve in the western lead and zinc district and the other inspector in the eastern lead and zinc district. Said districts in the lead and zinc field to be divided from north to south through the State by a line which will border the western boundary line of Cooper and Webster counties. Neither of the above-named inspectors shall be interested in any mine and each shall receive a salary of \$1,500 per annum, and there shall also be allowed and paid out of the general revenue fund the actual traveling expenses of the inspectors. The inspector appointed shall have authority to appoint a secretary of the bureau of mines, mining and mine inspection, who, in addition to his other qualifications, shall be a competent draughtsman and receive a salary of \$1,500 per annum.

Approved April 13, 1903.

PAGE 246.—*Payment of wages of mine employees, etc.—Semimonthly pay day.*

SECTION 1. Section 8791, article 2, chapter 133 of the Revised Statutes of Missouri of 1899 is hereby repealed and two new sections enacted in lieu thereof, to be known as sections 8791 and 8791a, which shall read as follows:

Section 8791. All persons or corporations engaged in or operating any mines, stone or granite quarries in this State shall pay their employees once in every fifteen days in lawful money of the United States, and at no pay day shall there be withheld any of the earnings due any such employee: *Provided*, Persons or corporations operating coal mines may withhold not to exceed five days of the earnings of employees. Any such operator or employer failing or refusing to pay his employees, their agents or assigns or anyone duly authorized to collect such wages as in this section provided, shall become immediately liable to such employee, his agent, assigns or anyone authorized to collect such wages for an amount double the sum due such employees at the time of such failure or refusal to pay the amount due, to be recovered by civil action in any court of competent jurisdiction within this State.

Sec. 8791a. All acts or parts of acts inconsistent with the provisions of this act are hereby repealed.

Approved March 23, 1903.

PAGE 247.—*Mine regulations—Explosives, etc.*

SECTION 1. An act to repeal sections 8826 and 8827, article 2, of chapter 133 of the Revised Statutes of Missouri, 1899, entitled "Safety and inspection of mines," and enact three new sections in lieu thereof, approved March 12, 1901, is hereby repealed and the following new sections enacted in lieu thereof:

Section 8826. All owners, agents or operators of coal mines shall require of all miners or other persons employed in and about a mine, using gun, blasting powder or other explosives, to have and keep a strong box in which all surplus gun, blasting powder or other explosives in the mine shall be kept, excepting so much as is necessary for immediate use. These boxes shall be kept locked and not opened unless it be to put in or take out powder. Nor must these strong (or powder) boxes be kept nearer than one hundred feet to the place of blasting. And in all dry and dusty coal mines discharging light carbonated hydrogen gas, or in mines where the coal is blasted off of the solid, shot firers must be employed by the operator of said mine or mines, to fire all shots after the employees and other persons have retired from the mine. And all shots prepared by the miner for the extraction of coal from off of the solid, must be so placed, drilled and charged, that the same, when fired, shall perform safely the duty required of such shots; but if the shot firers find or discover that a drill hole is gripping too much or that it is drilled too much into (what the miners term) "the

tight," and as may in the judgment of the shot firers, prove a windy, blow-out or otherwise dangerous shot, said shot firers shall there and then condemn such shot as too dangerous to fire and pass the same without firing it. It shall also be the duty of the shot firers to notify the mine foreman as soon as practicable, when a shot is condemned, who shall in turn attract the attention of the miner or miners responsible for the preparation of said condemned shot and said miner or miners shall immediately after returning to work provide the necessary remedy to render the said condemned shot harmless.

Section 8827. Any agent, owner or operator of any coal mine in this State violating the provisions of the preceding section shall be deemed guilty of a misdemeanor, and for each offense on conviction shall be fined not less than one hundred dollars nor more than two hundred and fifty dollars or by imprisonment in the county jail not less than six months nor more than one year or by both such fine and imprisonment. Proceedings to be instituted in any courts having competent jurisdiction.

Approved March 10, 1903.

PAGE 251.—*Fire escapes on factories, etc.*

SECTION 1. Section one (1) of an act entitled, "An act to provide for the construction and maintenance of fire escapes for * * * factories, office buildings, * * * approved March 27th, 1901, is hereby repealed, and the following new section enacted in lieu thereof:

Section 1. It shall be the duty of the owner, proprietor, lessee or keeper of every * * * factory, office building in the State of Missouri, and every building therein where people congregate or which is used as a business place, * * * which has a height of three or more stories to provide said structure with stair fire escapes attached to the exterior of said building and by stair cases located in the interior of said building. The fire escapes shall commence at the sill of the second story window, and run to the upper window sill of the upper story with an iron ladder from the upper story to the roof. The fire escape shall extend downward from said second story to within nine feet of the ground pavement or sidewalk. * * * In no case shall a fire escape run past a window where it is practicable to avoid it. All fire escapes required by this act must be of the kind known as stationary fire escapes. All buildings heretofore erected shall be made to conform to the provisions of this act.

SEC. 2. Section (2) of said act is hereby repealed and the following new section enacted in lieu thereof:

Section 2. When fire escapes are to be attached to buildings within a city they shall be constructed under the supervision of and subject to the approval of the commissioner or superintendent of public buildings within such city, and if there be no such officer within such city they shall be subject to the approval of the chief of the fire department of such city. Whenever a fire escape attached to any building located within a city, shall, upon inspection by the commissioner or superintendent of public buildings, or chief of the fire department of such city, be found in an unsafe and dangerous condition, the owner, lessee, proprietor or keeper of said building shall forthwith rebuild or repair same or replace same in safe condition, upon written notice of such commissioner or superintendent. When fire escapes are to be attached to buildings not within the limits of any city, they shall be subject to the approval of the sheriff of the county in which such building is located. And should such fire escape, through age or otherwise, be or become unsafe or dangerous, the same shall be repaired and placed in safe condition, upon written notice by said sheriff to the person in charge of such building. All fire escapes shall have proper and safe balconies for each story thereof, surrounded on the sides with wire bank and pipe rail not less than three feet in height with openings from the building to said balconies. Whenever a stair fire escape is to be constructed, the stairway shall, where practicable, be of an angle of not more than fifty-five degrees and constructed so as to be placed on a blank wall. The stair fire escape shall be provided with one or more landings in each story, and inclosed on the sides with wire bank and pipe rail not less than three feet in height and running on the same angle as the stairs.

SEC. 3. Section three (3) of said act is hereby repealed and the following new section enacted in lieu thereof:

Section 3. The number of fire escapes to be attached to any one building as required in this act shall, when the building is located within a city, be determined by the commissioner or superintendent of public buildings within such city, and if there be no such officer in such city, then by the chief of the fire department of such city: *Provided, however,* That all buildings of nonfireproof construction three or more stories in height used for manufacturing purposes, * * * shall have not less than one fire escape for every fifty persons or fraction thereof for whom work-
* * * accommodations are provided above the second story * * *

oved March 24, 1903.

INDEX.

Agreements between employers and employees:	Page.
Amusements.....	1634, 1635
Bricklaying.....	142-145
Building trades.....	146, 147
Clothing trades.....	934-936
Coal mining.....	638-650
Metal trades.....	424-435, 1631-1634
Painting and decorating.....	1623-1625
Printing trades.....	132-142, 415-421, 1626-1631
Shoe manufacturing.....	421-424
Slaughtering and meat packing.....	933, 934
Apprenticeship in France.....	440-444
Arbitration and conciliation. (See Conciliation and arbitration.)	
Arbitration, reports of State boards of:	
Colorado.....	158
Illinois.....	158
Indiana.....	159
Massachusetts.....	159
New York.....	159, 160
Ohio.....	160, 161
Wisconsin.....	161
Baths, public, in the United States.....	1245-1267
British industry and labor unions.....	1-103
Building and loan associations in the United States.....	1491-1572
Bureau of Labor, United States—	
Exhibit of the, at the Louisiana Purchase Exposition.....	969-1490
Working of the.....	973-989
Bureaus of statistics of labor—	
In foreign countries.....	1023-1086
In the United States.....	991-1021
Child labor in the United States.....	485-637, 1491
Coal-mine workers, union movement among.....	380-414
Conciliation and arbitration:	
Belgium, 1896 to 1900.....	664
France, 1902.....	668, 669
Great Britain, 1898 to 1902.....	677
Cooperative credit societies in India.....	1669, 1670
Cost of living and retail prices in the United States, 1890 to 1903.....	1129-1164
Cost of living and wages in the United States, 1890 to 1903.....	703-932
Course of wholesale prices in the United States, 1890 to 1903.....	219-379, 1165-1190
Decisions of courts affecting labor:	
Alien contract labor—promise of employment—construction of statute.....	172-175
Aliens—employment by municipal corporations—constitutionality of statute.....	454, 455
Benefit funds of labor organizations—rules.....	692, 693
Blacklisting—construction of statute—procuring discharge.....	950-952
Blacklisting—discharge of employees because of membership in labor union.....	202-204
Boycotting by members of association—conspiracy—coercion.....	958-961
Boycotting—strikes.....	955-958
Contracts of employment—enforcement—peonage—constitutionality of statute.....	175-177
Current rate of wages—constitutionality of statute—waiver.....	1672, 1673
Eight-hour law—	
mine employees—constitutionality of statute.....	678-680
mines and smelters—constitutionality of statute.....	952, 953
municipal corporations—constitutionality of statute.....	177-181
pay for overtime—army regulations.....	953-955
police power—constitutionality of statute.....	181-184
Employers' liability—	
accident insurance—disease as accidental injury.....	688-690
assumption of risk—effect of statute.....	680-687
employee attempting rescue.....	457
employment of children—effect of statute.....	448-450
employment of minors—competent employees.....	198
injuries causing death—constitutionality of statute.....	186-188
railroad company—control of locomotive—construction of statute.....	184, 185
railroad company—effect of statutory provisions.....	185, 186
railroad relief department—surgical attendance—malpractice.....	198-202
vice-principals—safe place to work—construction of statute.....	446-448
Exemption of wages—successive garnishments—abuse of process.....	1671, 1672

Decisions of courts affecting labor—Concluded.	Page.
Free public employment offices—employers having employees on strike—constitutionality of statute	188-190
Garnishment—abuse of process—punitive damages	1671, 1672
Garnishment—effect of judgment—sending claim out of State	190, 191
Injunction—	
discharge of employees because of membership in labor union—blacklist	202-204
intimidation—labor organizations—right to employment	457-460
labor organizations—liability for contempt of court	462-466
picketing	461, 462
picketing—employment of union labor exclusively	961-963
picketing—strikes—inter-state commerce	205-208
strikes—boycotting	955-958
strikes—criminal law—adequate remedy	690-692
strikes—labor organizations	201, 205
trade secrets—disclosure by employee	208
Interstate commerce—strikes	205-208
Intimidation—right to labor—labor organizations—constitutional law	450-454
Labor organizations	202-208, 450-454, 457-466, 692, 693, 961-963
Laborers' lien—who entitled—privity of contract	191-193
Liability of labor organization for contempt of court	462-466
Mechanics' liens—attorneys' fee—constitutionality of statute	1673, 1674
Peonage—enforcement of contracts of employment	175-177
Procuring discharge—liability	1674-1677
Procuring discharge—libel—blacklisting	950-952
Promise of employment—alien contract labor law	172-175
Protection of wages—contractors' bonds—constitutionality of statute	193, 194
Public works—current rate of wages—constitutionality of statute	1672, 1673
Railroad companies—liability for injury of employees of another road—joint use of tracks	455, 456
Seamen—payment of wages in advance—application of statute to foreign vessels	195-197
Strikes, etc.	188-190, 204-208, 450-454, 457-466, 690-692, 955-958
Trade secrets—disclosure by employee	208
Union labor—contract for exclusive employment	961-963
Digest of recent foreign statistical publications:	
Austria—	
Die Arbeitseinstellungen und Aussperrungen in Österreich während des Jahres 1901	655-660
Die Wohlfahrts-Einrichtungen der Arbeitgeber zu Gunsten ihrer Angestellten und Arbeiter in Oesterreich	1653-1662
Belgium—	
Statistique des Grèves en Belgique, 1896-1900	660-664
Canada—	
Report of the Royal Commission on Industrial Disputes in the Province of British Columbia	1662-1664
France—	
Apprentissage: Enquête et Documents	440-444
Statistique des Grèves et des Recours à la Conciliation et à l'Arbitrage survenus pendant l'Année 1902	664-663
Germany—	
Einrichtung und Wirkung der deutschen Arbeitsversicherung	941-949
Streiks und Aussperrungen im Jahre 1902	669-671
Great Britain—	
Ninth and Tenth Annual Reports on Changes in Rates of Wages and Hours of Labor in the United Kingdom, 1901 and 1902	165-171
Report of the Committee on the Establishment of Cooperative Credit Societies in India	1669, 1670
Report on Strikes and Lockouts in the United Kingdom in 1902, and on Conciliation and Arbitration Boards	672-677
Statistics of proceedings under the Workmen's Compensation Act, 1897, and the Employers' Liability Act, 1880, during the year 1900	162-165
Statistics of proceedings under the Workmen's Compensation Acts, 1897 and 1900, and the Employers' Liability Act, 1880, during the years 1901 and 1902	1664-1669
Norway—	
Tabeller vedkommende Arbejdslovnninger i Aaret 1900	1670
Ontario—	
Third Report of the Bureau of Labor of the Province of Ontario, for the year ending December 31, 1902	444, 445
Digest of recent reports of State bureaus of labor statistics:	
Illinois	1636-1638
Indiana	1634-1640
Iowa	1640-1642
Kansas	1613-1645
Maryland	148-150
Michigan	150-152
Missouri	1643, 1646
New Jersey	937-940, 1646-1650
North Carolina	152-155
Ohio	155-157
Pennsylvania	1650-1652
Rhode Island	436, 437
Virginia	437-439
Wisconsin	651-654
Education, trade and technical. (See Trade and technical education.)	
Employers and employees, agreements between. (See Agreements between employers and employees.)	
Employers' liability acts, proceedings under, Great Britain and Ireland	162-165, 1664-1669
Hand and machine labor in the United States	1419
Handicrafts, the revival of, in America	1573-1622
Hawaii, labor conditions in	1487-1490

	Page.
of labor and wages—	
In Great Britain and Ireland, changes in, 1901 and 1902.....	165-171
In the United States and in Europe, 1890 to 1903.....	724-728, 1119-1123
ing of the working people in the United States by employers.....	1191-1243
ance of workmen in the German Empire.....	941-949
reconditions in Hawaii.....	1487-1490
r, hand and machine, in the United States.....	1419
egislation in the United States.....	1421-1486
r statistics, value and influence of.....	1087-1096
r unions and British industry.....	1-103
values and ownership in Philadelphia.....	104-131
relating to labor:	
Accidents on railroads—Alabama.....	467
Age of employees not ground for discharge—Colorado.....	473
Appointment, etc., of employees of public-service corporations—Massachusetts.....	216, 217
Arbitration of labor disputes—	
Colorado.....	472, 473
Missouri.....	1682
Barbers, examination, etc., of. (See Examination, etc.)	
Blacklisting—	
Alabama.....	468
Minnesota.....	1680
Boarding houses, coercion of employees in choice of—Montana.....	968
Boycotting, blacklisting, etc.—Alabama.....	468
Children and women, employment of—Colorado.....	473, 474
Children, employment of, age limit for—	
Alabama.....	467
Arkansas.....	470
Colorado.....	474
Illinois.....	694-697
North Carolina.....	218
Children, employment of, general provisions—	
Arkansas.....	470
Illinois.....	694-697
Montana.....	964, 965
Children, employment of, hours of labor of—	
Alabama.....	467
Arkansas.....	470
Colorado.....	473, 474
Illinois.....	694-697
North Carolina.....	218
Children, employment of, in certain occupations forbidden—Illinois.....	694-697
Children, employment of, in mines—Colorado.....	474
Children, hiring out, to support parents in idleness—	
Alabama.....	467, 468
Georgia.....	1678
Children, night work by—	
Alabama.....	467
Arkansas.....	470
Illinois.....	694-697
Chinese, employment of, on irrigation works—Montana.....	968
Coercion of employees in choice of boarding houses—Montana.....	968
Contracts of employment involving removal from home locality—Michigan.....	484
Contracts of employment with intent to defraud—Georgia.....	1678
Convict labor—Indiana.....	211
Corporations, liability of stockholders of, for wage debts—Massachusetts.....	217
Discharge of employees on account of age—Colorado.....	473
Eight-hour day—	
Arizona.....	469
Delaware.....	210, 211
Missouri.....	1682
Montana.....	965, 968
Emigrant agents—	
Alabama.....	468
Florida.....	478
North Carolina.....	217, 218
Employers' advances, repayment of—Florida.....	478
Employers' liability. (See Liability of employers, etc.)	
Employers to furnish names of employees to assessors—Arkansas.....	470
Employment, contracts of. (See Contracts of employment.)	
Employment, interference with—Georgia.....	1678
Employment of labor by public-service corporations—Massachusetts.....	216, 217
Employment of labor, fraudulent representations in—Montana.....	965, 966
Employment offices—	
Connecticut.....	209
Illinois.....	698-700
Maine.....	214
Engineers, steam, examination, etc., of—Minnesota.....	1679, 1680
Examination, etc., of barbers—	
Connecticut.....	477, 478
Kansas.....	479-481
Examination, etc., of mine foremen, etc.—Missouri.....	1683-1685
Examination, etc., of plumbers—	
Kansas.....	483
Missouri.....	1680, 1681
Examination, etc., of steam engineers—Minnesota.....	1679, 1680
Exemption of wages—	
Colorado.....	479
Connecticut.....	
Illinois.....	

Laws relating to labor—Concluded.	Page.
Factory inspectors. (<i>See</i> Inspectors, factory.)	
Fire escapes on factories, etc.—	
Idaho	478, 479
Indiana	214, 215
Kansas	481, 482
Missouri	1686
Fraud, misrepresentation, etc., in the employment of labor—Montana	965, 966
Hours of labor of employees in mines—Arizona	469
Hours of labor of employees in smelters, etc.—Missouri	1682
Hours of labor of employees on railroads—	
Arizona	469
Arkansas	470, 471
Indiana	212
Minnesota	1679
Hours of labor of hoisting engineers at mines—Montana	965
Hours of labor of women. (<i>See</i> Children and women.)	
Hours of labor, etc., on irrigation works—Montana	968
Hours of labor on public works—Delaware	210, 211
Injuries causing death, right of action for—	
Connecticut	210
Illinois	701
Injuries, personal, right of action for—	
Connecticut	210
Florida	478
Inspection of factories, etc.—	
Connecticut	209, 210
Kansas	481, 482
Massachusetts	217
Michigan	484
Missouri	1681, 1682
Inspection of factories. (<i>See also</i> Fire escapes.)	
Inspection of steamboats—Indiana	211, 212
Inspection of steam boilers—	
Indiana	215
Minnesota	1679, 1680
Inspectors, factory—	
Connecticut	209, 210
Illinois	697, 698
Inspectors, mine—	
Colorado	477
Illinois	702
Missouri	1685
Montana	967, 968
Interference with employment—Georgia	1678
Labor Day—Arkansas	470
Labor organizations, registration of badges, etc., of—Massachusetts	216
Liability of employers for injuries to employees—	
Kansas	483
Montana	966
Liability of stockholders of corporations for wage debts—Massachusetts	217
Licensing of employees on oyster boats—North Carolina	218
Mechanics' liens—Arkansas	471
Mine foremen, examination, etc., of—Missouri	1683-1685
Mine regulations—	
Colorado	474-477
Illinois	701, 702
Missouri	1683-1686
Montana	965-968
Oyster boats, licensing of employees on—North Carolina	218
Payment of wages due discharged employees on railroads—Arkansas	471
Payment of wages in scrip—	
Arizona	469
Indiana	213, 214
Payment of wages, modes and times of—	
Illinois	700, 701
Missouri	1683, 1685
Plumbers, examination, etc., of. (<i>See</i> Examination, etc.)	
Printers, skilled, to be employed in bureau of public printing—Philippine Islands	218
Protection of employees as members of labor organizations—Kansas	481
Protection of employees as members of the national guard—Kansas	483
Protection of employees as voters—Alabama	468
Protection of employees on buildings—	
Indiana	212, 213
Minnesota	1680
Protection of employees on street railways—Illinois	702
Railroad trains, number of brakemen required on—Arizona	469
Railway, etc., companies, employment of labor by—Massachusetts	216, 217
Right of action for injuries. (<i>See</i> Injuries, etc.)	
Safety appliances on railroads—Indiana	213
Seamen, etc., repayment of employers' advances by—Florida	478
Street railways, protection of employees on—Illinois	702
Strikes, notice of, in advertisements, etc., for labor—Montana	965, 966
Strikes, participation in, not to be bar to employment—Minnesota	1680
Sunday labor—Florida	478
Wages as preferred claims—Colorado	472
Wages due employees, liability of stockholders of corporations for—Massachusetts	217
Wages, payment of. (<i>See</i> Payment of wages.)	
Women and children, employment of—Colorado	473, 474

	Page.
Louisiana Purchase Exposition, exhibit of the United States Bureau of Labor at the:	
Bureaus of statistics of labor in foreign countries	1023-1086
Austria	1024-1027
Belgium	1028-1040
Canada	1010-1016
Denmark	1016, 1047
France	1047-1056
Germany	1056-1059
Great Britain	1060-1063
Italy	1063-1071
Netherlands	1072, 1073
New South Wales	1073, 1074
New Zealand	1074, 1075
Norway	1075, 1076
Ontario	1076, 1077
Russia	1077
Spain	1077, 1078
Sweden	1078-1080
Switzerland	1080
International association for the legal protection of labor	1080-1086
Bureaus of statistics of labor in the United States	991-1021
Character and scope of actual work done	1013-1020
Duties of bureaus and their officers	1004-1008
Legal powers and methods of investigation	1008-1013
Origin of bureaus	984-999
Personnel and financial resources	999-1004
Results	1020, 1021
Cost of living and retail prices in the United States, 1890 to 1903	1129-1164
Consumption of food	1156-1158
Cost of living	1129-1155
Retail prices	1158-1163
Wholesale and retail prices	1163, 1164
Hand and machine labor in the United States	1419
Housing of the working people in the United States by employers	1191-1243
American Waltham Watch Company, Waltham, Massachusetts	1194-1198
Colorado Fuel and Iron Company	1198-1206
Cornell Company, J. B. and J. M., Coldspring, New York	1206, 1207
Draper Company, The, Hopedale, Massachusetts	1207-1209
Ludlow Manufacturing Associates, Ludlow, Massachusetts	1209-1213
Maryland Steel Company, Sparrow Point, Maryland	1214, 1215
Nelson, N. O., Manufacturing Company, Leclaire, Illinois	1215-1218
Niagara Development Company, Niagara Falls, New York	1218-1220
Peacedale Manufacturing Company, Peacedale, Rhode Island	1221-1223
Pelzer Manufacturing Company, Pelzer, South Carolina	1224-1226
Plymouth Cordage Company, North Plymouth, Massachusetts	1226-1234
Stetson Company, The John B., Philadelphia, Pennsylvania	1234-1239
Warren & Co., S. D., Cumberland Mills, Maine	1239-1241
Westinghouse Air Brake Company, Wilmerding, Pennsylvania	1241-1243
Labor conditions in Hawaii	1487-1490
Labor legislation in the United States	1421-1486
Boards of arbitration and conciliation	1480-1484
Boycotting, blacklisting, intimidation, etc	1474-1477
Bureaus of labor	1484
Child labor	1443-1454
Employers' liability	1469-1474
Employment of women	1440-1443
Free public employment bureaus	1484-1486
Hours of labor	1435-1439
Labor in factories, sweat shops, etc	1422-1427
Labor organizations	1477-1480
Licensed occupations	1454-1460
Mine labor	1428-1430
Payment of wages	1460-1469
Railway labor	1430-1435
Sunday labor	1439, 1440
Public baths in the United States	1245-1367
Municipal—	
Albany, New York	1271, 1272
Baltimore, Maryland	1272-1275
Boston, Massachusetts	1275-1296
Bridgeport, Connecticut	1296, 1297
Brookline, Massachusetts	1297-1305
Brooklyn, New York	1305-1308
Buffalo, New York	1308-1311
Cambridge, Massachusetts	1311, 1312
Chicago, Illinois	1312-1319
Cleveland, Ohio	1319, 1320
Des Moines, Iowa	1320
Detroit, Michigan	1320, 1321
Hartford, Connecticut	1321
Hoboken, New Jersey	1321, 1322
Holyoke, Massachusetts	1322, 1323
Kansas City, Missouri	1323
Louisville, Kentucky	1323, 1324
Milwaukee, Wisconsin	1324-1326
Minneapolis, Minnesota	1326
Newark, New Jersey	1326, 1327
New Bedford, Massachusetts	1327
Newton, Massachusetts	1328

	Page.
Louisiana Purchase Exposition, exhibit, etc.—Concluded.	
Public baths in the United States—Concluded.	
Municipal—Concluded.	
New York, New York	1328-1336
Philadelphia, Pennsylvania	1336, 1337
Portland, Maine	1337, 1338
Providence, Rhode Island	1338
Rochester, New York	1338, 1339
St. Paul, Minnesota	1339-1341
Springfield, Massachusetts	1341, 1342
Syracuse, New York	1342
Taunton, Massachusetts	1312, 1343
Troy, New York	1343
Utica, New York	1343
Washington, District of Columbia	1343-1347
Wilmington, Delaware	1347
Worcester, Massachusetts	1347
Yonkers, New York	1347-1349
Nonmunicipal—	
Allegheny, Pennsylvania	1351, 1352
New York, New York	1349-1351
Philadelphia, Pennsylvania	1354-1357
Pittsburg, Pennsylvania	1352-1354
San Francisco, California	1357-1361
Special bathing appliances	1361-1367
Strikes and lockouts in the United States, 1881 to 1900	1097-1117
Trade and technical education in the United States	1396-1417
Armstrong and Slater Memorial Trade School, Hampton Normal and Agricultural Institute, Hampton, Virginia	1411-1414
California School of Mechanical Arts, The, San Francisco, California	1392-1394
Dairy School, University of Wisconsin, Madison, Wisconsin	1396, 1397
Department of Dairying, Iowa State College of Agriculture and Mechanic Arts, Ames, Iowa	1397, 1398
Lowell Textile School, Lowell, Massachusetts	1404-1407
Mount Meigs Colored Industrial Institute, Waugh, Alabama	1417
New Bedford Textile School, New Bedford, Massachusetts	1407, 1408
New York Trade School, New York, New York	1383-1385
Philadelphia Textile School and School of Industrial Art, Philadelphia, Pennsylvania	1403, 1404
Pratt Institute, Brooklyn, New York	1385-1389
Rochester Athenaeum and Mechanics' Institute, Rochester, New York	1408-1410
St. George's Evening Trade School, New York, New York	1389, 1390
Snowhill Industrial Institute, Snowhill, Alabama	1417
Tuskegee Normal and Industrial Institute, Tuskegee, Alabama	1414-1416
Williamson Free School of Mechanical Trades, Pennsylvania	1390-1392
Wilmerding School of Industrial Arts, The, San Francisco, California	1395
Women's Training School, St. Louis, Missouri	1401
Young Women's Christian Association School, Boston, Massachusetts	1399, 1400
Young Women's Christian Association School, New York, New York	1400, 1401
Value and influence of labor statistics	1087-1096
Wages in the United States and in Europe, 1890 to 1903	1119-1128
Wholesale prices in the United States, 1890 to 1903	1165-1190
Working of the United States Bureau of Labor, The	973-989
Prices, retail. (See Retail prices.)	
Prices, wholesale. (See Wholesale prices.)	
Railway employees in Austria, Institutions for the welfare of	1658-1662
Retail prices and cost of living in the United States, 1890 to 1903	1129-1164
Revival of handicrafts in America, the	1573-1622
Strikes and lockouts:	
Austria, 1901	655-660
Belgium, 1896 to 1900	660-664
France, 1902	664-669
Germany, 1902	669-671
Great Britain and Ireland, 1902	672-677
United States, 1881 to 1900	1097-1117
Trade and technical education in the United States	1389-1417
Union movement among coal-mine workers	380-414
Wages and cost of living in the United States, 1890 to 1903	703-932
Wages and hours of labor:	
In Great Britain and Ireland, changes in, 1901 and 1902	165-171
In the United States and in Europe, 1890 to 1903	724-728, 1119-1128
Wages, rates of, in Norway	1670
Wholesale prices, course of, in the United States, 1890 to 1903	219-379, 1165-1190
Workingmen's insurance in the German Empire	941-949
Workingmen's insurance in the United States, housing of the, by employers	1191-1243
Workmen's compensation acts, proceedings under, Great Britain and Ireland	162-165, 1664-1669

LEADING ARTICLES IN PAST NUMBERS OF THE BULLETIN.

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Labor conditions in Cuba.
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